HALIFAX DARTMOUTH PORT COMMITTEE

FINAL REPORT TO THE PROVINCE OF NOVA SCOTIA EXECUTIVE COUNCIL ON ISSUES AFFECTING THE PORT OF HALIFAX

DECEMBER 30, 1982

HALIFAX, N.S.

VOLUME I - REPORT

35✓

HALIFAX DARTMOUTH PORT COMMITTEE

FINAL REPORT ON THE ISSUES AFFECTING THE PORT OF HALIFAX

VOLUME I - REPORT

TABLE OF CONTENTS

LETTER OF TRANSMITTAL

1. INTRODUCTION

2. SUMMARY

A. PORT OF HALIFAX - PERSPECTIVE

B. PORT PROMOTION

    B.1 Introduction

    B.2 Port Promotion Report

    B.3 Present Status of Committee Recommendations Regarding the Port of Halifax Development Authority

C. INTERNATIONAL CONTAINER SHIPPING TRENDS

    C.1 Introduction

    C.2 Liner Shipping Route Evolution

    C.3 Rationalization of Shipping Services

    C.4 New Construction and Characteristics

. . . 2

TABLE OF CONTENTS

C.5 Employment of New Tonnage and Route Structures

C.6 International Agreements

C.7 Port Selection and Factors Affecting Halifax

C.8 Conclusions and Recommendations

D. CANADIAN NATIONAL RAILWAYS

D.1 Introduction

D.2 The Halifax-Montreal Rail Link

D.3 The Overland Route Potential

D.4 The "CAST" Investment

D.5 Canadian National Railways Commercial Interests at the Port of Halifax

D.6 Conclusions and Recommendations

E. FREE MARINE SERVICES ON THE ST. LAWRENCE RIVER

E.1 Background

E.2 The Halifax/Montreal Situation

E.3 The Direct All-Water Route to Montreal

E.4 Icebreaking Costs

E.5 Dredging Costs

E.6 Navaid Costs

E.7 Recovery of Costs

E.8 Impact on Nova Scotia Ports

E.9 Conclusions and Recommendations

. . . 3

TABLE OF CONTENTS

F. SOME OTHER ISSUES WHICH AFFECT THE PORT OF HALIFAX

F.1 Introduction

F.2 Regulatory Changes in the United States

F.3 Port Costs

F.4 Multimodalism

F.5 Offshore Oil and Gas

F.6 At-and-East Rates for Grain and Flour Shipments

F.7 Maritime Freight Rates Act and Atlantic Region Freight Assistance Act

F.8 Sea/Air Cargo Links

F.9 Arctic Supply

F.10 Conclusions and Recommendations

GLOSSARY OF TERMS

BIBLIOGRAPHY

Halifax Dartmouth Port Committee
P.O. Box 1617, Station "M"
Halifax, Nova Scotia
B3J 2Y3

December 30, 1982

Honourable John M. Buchanan, P.C., Q.C.
Premier
Province of Nova Scotia
Province House
Halifax, Nova Scotia

Dear Mr. Premier:

I am writing to advise you that the final report of the Halifax Dartmouth Port Committee has been completed and is attached herewith. We hope that this report will be helpful to the Government of Nova Scotia and the Port of Halifax as it identifies areas of opportunity and some serious problems.

We see an urgent requirement for the structuring of the Port of Halifax Development Authority as proposed in our initial report on Port Promotion and Marketing to serve as the cornerstone of a program to deal effectively with the problems and opportunities identified in the final report.

Yours very truly,

John L. Grice
Chairman
Halifax Dartmouth Port Committee

JLG/fb

1. INTRODUCTION

1.1 Background

During the past ten years, the Port of Halifax, led by the pioneering development of container facilities, has experienced steady growth and port activity has changed from a cyclical pattern peaking in winter to a more balanced year round level. In the latter half of the 1970's, planning and development of facilities for future development of the port were initiated.

However, in the past few years changes in world trade patterns and levels, realignments in the ocean shipping patterns, increases in inland transportation costs, and strong competition from other ports have raised concerns about the future growth of the Port of Halifax as a nodal point in the worldwide transportation network.

These concerns were dramatically highlighted when the port lost about one-third of its volume of container cargoes through the transfer of Dart Containerline to Montreal and the loss of Trans Freight Lines to U.S. ports in 1981. While some of this loss has subsequently been recovered, the losses and gains illustrate the volatile nature of the industry and the concomitant need for the Port of Halifax to keep abreast of changing circumstances.

The Province of Nova Scotia addressed these concerns by establishing in late November 1981 a Committee chaired by John Grice to carry out an in-depth examination of the internal and external factors which influence the port's development and to make recommendations as to actions which are needed to respond to the realities of the 1980's. The Committee reports to the Executive Council through the Premier, the Honorable John M. Buchanan, Q.C., P.C.

Members of the Committee are:

John L. Grice, Chairman
Jack N. Bathurst
George H. Briand
Rand H. Matheson
Thomas B. Nickerson
Robert P. Radchuck

1.2 Committee Terms of Reference

The Committee, in its terms of reference, was asked to investigate and examine the following points:

1. The effectiveness of all present efforts to promote the Port of Halifax/Dartmouth.
2. The impact of C.N.R. policies and the Federal government policies on the Port of Halifax/Dartmouth.
3. The impact of C.N.R. policies and the Federal government's assistance to the Port of Montreal and the St. Lawrence River on the Port of Halifax/Dartmouth.
4. Future trends in North American port development.
5. The importance of other modes of transportation to the Port of Halifax/Dartmouth (highway, rail and air).
6. The impact on the Port of Halifax/Dartmouth of government policies relating to those transportation modes.
7. All other matters which the Committee considers important to the promotion and development of the Port of Halifax/Dartmouth.

1.3 Committee Activities

The Committee met weekly from December 1981 to December 1982. During the course of its work, the Committee reviewed most of the previous studies dealing with the port, examined technical and trade developments, reviewed and analyzed considerable information on railway and ocean operations, and held "in camera" meetings with a broad cross-section of the local, national and international shipping community. Appendix 1 presents a list of individuals interviewed and their affiliation.

1.4 Port Promotion and Marketing Report

The Committee was asked to deal initially with the first of its terms of reference - the effectiveness of present efforts to promote the port - since particular concern had been expressed about the roles and structures of the port promotion agencies and their overall effectiveness.

Accordingly, the Committee considered the port promotion issue first and prepared a report of its findings and recommendations which was submitted on February 26, 1982. The report, titled "Port Promotion and Marketing", was written as a stand alone document dealing with the subject matter. The Executive Summary of the report on Port Promotion and Marketing is reproduced in Section B of this report. The reader is referred to the original report for further information.

1.5 Final Report

This final report presents a summary of a number of external influences and their interactions which are now, or are likely in the near future, to affect the competitiveness of the Port of Halifax and the "via Halifax" route for overseas traffic moving to and from inland Canadian and U.S. market areas. A brief analysis of each topic is given together with recommendations for actions which should be taken to respond to the opportunities and impediments presented by these influences. The proposed Port of Halifax Development Authority (see Port Promotion and Marketing report) is expected to take a leading role in responding to the opportunities and minimizing the effect of the impediments so that the Port of Halifax can achieve its full potential in the multimodal transportation world of the 1980's.

1.6 Issues Examined

The summary, of necessity, deals only briefly with the many issues which are likely to affect the Port of Halifax. The individual issues are examined in more detail in Sections B through F. The sections have been written so that they can be read, in conjunction with the Section A Port of Halifax - Perspective as stand alone pieces.

A - Port of Halifax - Perspective

B - Port Promotion and Marketing

C - International Container Shipping Trends

D - Canadian National Railways

E - Free Marine Services on the St. Lawrence River

F - Some Other Issues Affecting the Port of Halifax

- Regulatory Changes in the United States
- Port Costs
- Multimodalism
- Offshore Oil and Gas
- At-and-East Rates for Grain and Flour Shipments
- Maritime Freight Rates Act and Atlantic Region Freight Assistance Act
- Sea/Air Cargo Links
- Arctic Supply

2. SUMMARY

2.1 The Port of Halifax in Perspective [1]

In this report, the Port of Halifax is considered as embracing all modes of transportation (sea, rail, road and air) and their associated facilities, services and infrastructure within the Halifax Metropolitan area which are used for the movement and handling of cargoes in international and interprovincial trade.

The port has an annual economic impact on the metropolitan area of well in excess of one billion dollars, and the frequency and diversity of liner shipping services which use the port are vital for the continued prosperity of most sectors of the Provincial economy. 13.3 million metric tons of cargo moved through the port in 1981, of which liquid and dry bulk cargoes accounted for about 11 million tons (82%), general breakbulk cargoes (cars, flour etc) about 0.5 million tons (4%), and unitized liner cargoes (containers and Roll on/Roll off) 1.8 million tons (14%).

---

[1] See Section A of Report.

Bulk cargoes, generally considered "captive" trades, are handled through special facilities controlled by major corporations such as oil refining companies and National Gypsum Canada Ltd. These bulk cargoes are of great importance to the port and should be monitored by the Port of Halifax Development Authority. However, barring major change in the supply/demand pattern for the commodities, these cargoes are captive to the port and likely to remain so.

Unitized liner cargoes moving through the port are, by comparison, highly mobile. While only 14% of total port volume, liner cargoes are critical in ensuring the level and diversity of liner shipping services which are essential to the provincial economy. Of the 1.8 million tons of unitized liner cargoes which moved through the port in 1981 only 0.4 million tons was generated within the region. The other 1.4 million tons was cargo moving on the "via Halifax" route between Central Canadian/U.S. and overseas destinations. "In transit" cargoes are vital to the port.

Thus the port cannot stand in isolation. It must concern itself with many complex and interacting elements external to the port which can affect the cost effectiveness of the total through movement of cargoes from origin to destination via the Halifax route relative to other routings. In accordance with the Committee's terms of reference this report discusses a number of the outside influences which have affected, and will continue to affect, the via Halifax route for unitized liner cargoes and hence the prosperity of the Port of Halifax.

2.2 Port Promotion and Marketing [1]

The Committee issued a report on Port Promotion and Marketing in February 1982. That report recommended the discontinuance of Halicon as a container traffic promotion agency and the replacement of the Halifax/Dartmouth Port Commission by a new body having more resources and broader responsibilities. The Provincial government is to have the major role, with participation of the metro area municipalities, in the new body to be known as the Port of Halifax Development Authority (PHDA). The Provincial government has indicated its support of the report's recommendations. Its implementation should be completed by April 1983.

---

[1] See Section B and the February 1982 report, Port Promotion and Marketing.

2.3 International Container Shipping Trends [1]

International container shipping is still in an evolutionary state. The world economic situation, together with rising costs for fuel, wages, equipment and infrastructure are forcing shippers, ship owners, and transport operators to adopt new methods and technologies which in turn creates a highly volatile and competitive situation in international shipping.

Higher operating costs, excess capacity on shipping routes and depressed world markets have forced many shipping lines to set up cargo pooling arrangements or to join together in operating rationalized or consolidated services. A number of lines will shortly be introducing third generation container ships which are generally characterized by being of larger capacity and more economical to operate. However even though ship owners will be able to achieve lower operating costs or "cost per TEU mile" with the new ships, they are also closely examining their strategies as regards route structures, sailing frequencies and ship operating speed in their attempts to achieve the greatest possible economy of operation.

---

[1] Sections C and F contain further discussion on the topics outlined under this heading.

The new route structures are predicated on achieving the highest possible ship utilization rate and load factors. This is achievable in part by reducing the number of ports called at either to provide the same sailing frequencies at lower speeds, or to reduce the number of ships needed to service a route. As a result of the emphasis on reducing port calls the cost effectiveness of inland transportation links and marine feeder services is becoming increasingly important to the competitiveness of any port.

Many shipping lines already operate services on several bi-regional routes such as N.America/Europe, Europe/Far East and N. America/Far East. However a trend is appearing in which some lines will be merging their bi-regional routes into multi-regional routes and some will encircle the globe with bi-directional "round the world" (RTW) services. These new services will likely be very competitive and impinge heavily on the existing over capacitated North Atlantic routes. The use of larger, deeper draught, ships on RTW routes may make Halifax the only practical port of call in Eastern Canada.

Certain present and pending national, bi-national and international policies, agreements and conventions, will influence and distort some of the economics of international shipping operations. Of immediate interest to Canada, especially Halifax, is the deregulation of inland transport and the emerging shipping policy of the U.S. These policy directions, together with the impact of multi-regional or RTW services on existing trans-Atlantic routes, is likely to make Atlantic seaboard ports more attractive than Montreal. The cost effectiveness of inland transport connections from Halifax becomes of paramount importance if considerable loss of Canadian cargoes to New York is to be avoided. At present the projected RTW and multi-regional routes do not include any Canadian ports but do include New York and Seattle.

The "direct shipment" clause in some bilateral trade agreements which can require national cargoes to be shipped through national ports rather than those of a contiguous country could be an influencing factor. Canada may have to resort to such a strategy if too many of the new shipping route structures by-pass Canadian ports.

These situations highlight the need for the PHDA to not only vigorously promote the via Halifax route, but also to maintain continuing vigilance in evaluating the world shipping scene and ensuring that the "via Halifax" route achieves and maintains a competitive edge over routes via other eastern Canadian and U.S. ports.

2.4 Canadian National [1]

A dominant issue for shippers and shipping lines using the via Halifax route is the level of rail rates and service provided by Canadian National Railways (CNR) between Halifax, Montreal and inland points west thereof. CNR has a monopoly on Halifax rail services and facilities and is therefore in a position to make or break the port as a gateway for Canadian and some U.S. container traffic. New trends in shipping technology and route structures suggest that Halifax could become the only logical eastern Canadian port of call for large ships on RTW or multi-regional routes. These two points illustrate the importance of Canadian National (CN) to the Port of Halifax and also indicate that the success of the port generates volume for CN.

---

[1] Further discussion on this topic is contained in Section D.

CNR states that the rail link to Montreal is in excellent physical condition but is only used to 30% of its capacity. However rail rates on this route have more than trebled since the late 1960's and CNR seems insensitive to the shipping lines' needs and to the potential for encouraging traffic by dynamic promotional programmes or by adjusting volume discounts and applying incremental rates.

CNR has direct promotional activities on behalf of Vancouver and Montreal and the inland routes therefrom, but the via Halifax route is only included in general promotional material covering all Canadian ports. In tariff structures for container traffic between Halifax and midwestern and western points in Canada/U.S., Halifax is included only as an "add on" over Montreal. It is considered that more in transit traffic could be attracted to use the via Halifax route if a tariff structure and the mini and micro-bridge concepts could be developed and promoted by CNR quoting Halifax as a "base port" rather than as an "add on" over Montreal.

Deregulation policies in the U.S. are creating a much more competitive situation with regard to inland transportation. This, coupled with the new shipping methods and technologies, could draw traffic away from Canadian ports unless the Canadian railroad system can be equally competitive and aggressive. The potential of the mini-landbridge and micro-landbridge concepts in Canada, by Canadian carriers, must be vigorously pursued and developed in a balanced and equitable manner for all regions and major ports in Canada. That the potential exists is evidenced by the success of these concepts in the U.S. For instance, American President Lines finds it both cheaper and quicker to move their Far East container traffic by rail between west coast U.S. ports and eastern points than to ship direct by sea to U.S. east coast ports.

CN must identify and act on the many opportunities that are presenting themselves through new trends in shipping methods and technologies. The whole tariff structure as regards container traffic appears to be in need of modification to make it more compatible with present needs and future requirements. The present CNR attitude gives an impression that the Canada it serves, and where it perceives its opportunities lie, is between Montreal and Vancouver, with the Maritimes being regarded as an irksome appendage. This feeling is reinforced when one considers that in 1975, as now, CN had the complete monopoly to handle all container traffic moving through Halifax and competed freely with Canadian Pacific (CP) for Montreal traffic. However it invested in CAST, a high risk offshore shipping line, which only operates out of Montreal, to ensure a portion of that market for itself. This CN involvement with CAST is to the detriment of its Halifax customers.

The direct conflict of interest which results from CN's monopolistic position in providing rail services for the shipping lines using Halifax, and its involvement with the CAST shipping group which operates in direct and bitter competition with Halifax based shipping lines, is seen as being an extremely serious problem for the Port of Halifax. The CAST involvement is one which adversely influences CN's attitudes toward developing and promoting the via Halifax route.

Given that the Port of Halifax is substantially dependent for its continued prosperity and future growth on the cost effectiveness and level of service provided by CNR, the Committee recommends that CN must be divorced from CAST and that the Nova Scotia government use all means possible to achieve this. It further recommends that CNR, especially top management in Montreal must:

(a) take a greater and more constructive role in developing and promoting the "via Halifax" route.

(b) make every effort to utilize the 70% unused rail capacity on the Halifax/Montreal route through better volume discounts to large customers and through "pooling" arrangements.

(c) exercise vigilance to ensure its attitudes and policies are constantly directed toward achieving lower costs and high service levels through technological innovation.

(d) in the national and regional interest, remain constantly alert to the threat of loss of Canadian traffic to New York which could result if trends in shipping technology and route structures make Halifax the only viable East Coast Canadian port and if the "via Halifax" route becomes uneconomic due to uncompetitive inland transportation costs. In this event CN is virtually the only organization that can prevent the diversion of Canadian traffic to U.S. ports.

Additionally, great concern was expressed over CN's monopolistic position in Halifax and it is recommended that this must be voided by introducing other alternatives such as the possibility of CP running rights into Halifax or dedicated liner trains over CN tracks organized by private companies. Also the Minister of Transport must cause the Canadian Transportation Commission (CTC) to exercise greater control over the level of costs and services on this route.

Finally, the recent delays in CTC hearings into the CN/CAST involvement and the rebating by CN on CAST traffic indicates that there are serious flaws in the present legislation or its enforcement which must be rectified.

2.5 Free Marine Services on the St. Lawrence River [1]

The non recovery of Federal government costs for icebreaking, escorting and dredging services to shipping using Montreal, while the railway is required to charge compensatory rates to Halifax, causes an artificial distortion of transport economics in eastern Canada, is detrimental to the via Halifax route, and does not conform to the letter and intent of the National Transportation Act.

From the data made available by the Federal government and its Crown Corporations it is estimated that in 1980/81 icebreaking costs for navigation only (not flood control) in the Gulf of St. Lawrence and the St. Lawrence River amounted to a minimum of $10.5 million and that the average maintenance dredging costs in the St. Lawrence are a minimum of $2.5 million annually. Overall capital costs for dredging were not available, however, identifiable capital costs for dredging at two facilities in recent years amounted to nearly $22 million. Shipping lines using the via Halifax route have been subjected to a tripling of container rail rates since 1970 while shipping to Montreal incurs no costs whatsoever for icebreaking and dredging services even though the cost to the Federal government to provide these icebreaking services has also tripled in the same period. In effect, this is a government subsidy which encourages foreign shipping lines to use Montreal to the detriment of the national railroad and the Port of Halifax.

---

[1] Further discussion on this topic is contained in Section E.

The Federal government should take immediate steps to rectify the situation. Insofar as icebreaking is concerned, ice dues should be levied on ships (not cargo) using the river ports during the ice season, say mid-December to end April.

The recovery of capital costs for dredging which is carried out to directly benefit an individual port or facility should be charged as a capital improvement cost against the beneficiary. Capital costs for dredging and maintenance dredging costs for channels that benefit more than one port or facility should be recovered, in a similar manner to pilotage dues, from all shipping benefitting therefrom. On the other hand, maintenance dredging required by an individual port or facility should be recovered as part of the port dues levied on shipping using the particular port or facility.

Unlike ice dues, dredging dues should be charged on shipping throughout the year. They should be assessed in a manner to reflect a ship's draught and need; i.e. deeper draught vessels would pay more than those with shallower draught, and ships having a draught less than the natural or pre-dredged depth of water could be exempted.

The Federal government must be prevailed upon to take immediate action to rectify this artificial distortion of the economics between the land and marine modes of transportation in eastern Canada. The government of Nova Scotia should also use all means possible to get federal action on this issue, insisting if necessary, that the Federal Minister of Transport direct the CTC to hold an enquiry and public hearings.

2.6 At-and-East and Other Assistance [1]

The "At-and-East" subsidized rates, which apply only to grain and flour shipments through eastern Canadian ports, are seen as being important under the present circumstances. They may become subject to modification depending on the outcome of the present Crow's Nest rate negotiations.

The subsidy on export traffic through Halifax and other Atlantic seaboard ports under the

---

[1] See Sections F.6 and F.7

Maritime Freight Rates Act and the Atlantic Region Freight Assistance Act are only applicable to cargoes originating east of Levis, Quebec and south of the St. Lawrence. They exert no influence on central and western Canadian/U.S. cargoes moving through Halifax for which the railway charges compensatory rates.

2.7 Multimodalism [1]

Shipping lines, shippers and freight forwarders are moving away from the "port to port" concept of ocean shipping. The "total cost of transportation from origin to destination" is becoming the dominant factor in routing cargo. Multimodal traffic will normally gravitate to the most cost effective "through route". The Port of Halifax is an interface between modes and is only one link in the total transport chain. Thus the port must concern itself, not only with its own efficiency, costs and levels of service, but also those of the providers of its connecting inland and transoceanic transport services and facilities.

---

[1] See Section F.4 for further discussion.

Although some Freight Forwarders and a few specialized companies act as "non vehicle operating" common carriers by issuing through bills of lading for door to door shipments and selecting the combination of land/sea carriers and routing of cargoes, most inland road and rail common carriers also provide a similar service. However, on the North Atlantic routes it is the offshore controlled shipping lines who presently dominate the multimodal market; it is they who decide which combination of ports, feeder services and inland carriers at both ends of the voyage can give them an edge over their competitors. This highlights the problem in Canada where the two common carrier railways are permitted to be corporate partners in shipping lines. It automatically limits their international multimodal capability by restricting their choice of ocean carriers and places them in direct competition with their other shipping line customers. It also highlights the inequity of free icebreaking and dredging services to Montreal vis a vis compensatory rail rates to Halifax.

The rebating by CN to benefit its own shipping line partner CAST, together with the deregulation of inland carriers rates in the U.S., when viewed in the multimodal context, is indicative that the present system for establishing rail tariffs and through rates in Canada is in urgent need of revision to bring it into line with present reality and future needs.

Another potential for developing multimodal traffic through the port which is often overlooked is the Sea/Air Link whereby transoceanic cargoes are moved between the seaport and inland points by airfreight. It can be of considerable benefit to shippers of time sensitive cargoes in that, although more expensive than the all surface route, it achieves considerable savings on the all air route.

2.8 Port Costs [1]

While the trend toward multimodalism and "door to door" transportation establishes the need for the port to concern itself with many external factors, it also clearly indicates that, as a vital link in the transport chain, the cost effectiveness of the port itself is of major importance. The relevant costs are those which (a) accrue to the ship in using the port, i.e., from picking up pilot on arrival, to dropping off pilot on departure, (b) accrue to the inland carrier for the provision or rental of services and infrastructure within the port area, and (c) accrue to the cargo for handling, consolidation, transit or storage. Included in all of these are not only the direct charges for the actual costs incurred, but also indirect charges or overheads for recovery of investment in infrastructure, equipment, administration, management, labour benefits, support for certain service organizations such as the Shipping Federation and the Maritime Employers Association and local taxes. It is worth noting that from 1971 the Port of Halifax has been assessed municipal taxes which average 20% of the port's operating revenues whereas Saint John and Quebec, ports of comparable size, have only averaged 9%.

---

[1] See Section F.3 for further discussion.

General speaking, the total overall cost of using major Canadian ports is less than that for U.S. ports.

Under the new Canada Ports Act, the ports, as self sustaining Crown Corporations, will be able to exert greater control over their own cost effectiveness. Good business management at the local level becomes essential. It also becomes necessary that each and every element which goes to make up the various port charges and dues are constantly monitored to ensure that (a) they are kept as low as possible commensurate with good service, (b) that they are legitimately necessary in that they contribute to services essential to the port, and (c) that peripheral charges do not creep in.

2.9 Conclusions and Recommendations

The Committee has dealt with a wide variety of interacting issues which affect the competitiveness of the via Halifax route over those via other ports in accordance with the terms of reference.

The Port of Halifax is a major nodal point in the total transport chain. This report highlights how current developments and future trends in shipping technology, route structures and inland transportation are the result of a complex interaction of economic, political and technical factors. It identifies some areas of opportunity for the port as well as some factors which are or could be a threat. The need for a capability to constantly monitor and evaluate the world shipping scene, the importance of connecting inland transport facilities to the port and an aggressive promotional programme are evident. The report highlights the fact that changing shipping technology and route patterns could give Atlantic seaboard ports an ascendence over Montreal. This indicates greater opportunity for Halifax and for the CNR, provided that CNR enables the via Halifax route to be competitive with the via New York route.

While a number of specific recommendations are included in this report it is recognized that an organization is needed to implement these recommendations. This organization should be the Port of Halifax Development Authority (PHDA), as recommended in the Committee's earlier report. The PHDA must perform ongoing research to keep abreast of new developments, identify their impact on the port, initiate action to capitalize on new opportunities and insure that the complex amalgam of interacting elements which make up the port operates and functions with optimum effectiveness.

The Province of Nova Scotia should immediately establish the Port of Halifax Development Authority and direct it to act on the specific recommendations in this report. This report provides a foundation for and is indicative of the scope and orientation of the important tasks that must be undertaken by the Port of Halifax Development Authority in the immediate future in addition to its promotional and marketing activities.

A. PORT OF HALIFAX - PERSPECTIVE

A. PORT OF HALIFAX - PERSPECTIVE

Two statements summarize the importance of the Port of Halifax to Nova Scotia:

1. The Port of Halifax has an economic impact in excess of one billion dollars per year on the Halifax metropolitan area.[1]

2. The frequency and diversity of shipping services which use the port are essential for the continued prosperity of most sectors of the provincial economy.

It is hence easy to understand the concern of both municipal and provincial governments when trends emerge that threaten the future of the port. The various sections of this report discuss some of the issues which are now or are likely in the near future to impact on the continued development of commercial shipping via the Port of Halifax. To put these issues in perspective, it is appropriate to present the following brief outline of the Port of Halifax and its relationship to Nova Scotian, Canadian, and world trade.

---

[1] "The Economic Impact of the Port of Halifax" by the Centre for Development Projects, Dalhousie University, Halifax, N.S. - 1977

The term "Port of Halifax" as used in this report has two connotations, one physical and one commercial:

Physical:[1] the physical area of the port embraces all waters lying northwest of a line running between Tribune Head (Herring Cove) and Hartlen Point, including all islands and lands accessing the waterfront which are presently used for commercially oriented marine activities or which could become available for such uses in the future.

Commercial: the "commercial" aspect of the port embraces all marine, surface and air transportation services and facilities contributing to, or engaged in the movement, handling and storage of commercial goods into and through the sea and air ports of Halifax. It also embraces the complementary and support services associated with marine, surface and air transportation and the offshore, which can derive direct or indirect benefits from servicing or supplying shippers, shipping lines, road, rail and air services connected with the movement, handling and storage of goods into and through the sea and air ports of Halifax.

---

[1] The National Harbours Board (NHB) definition of the Port of Halifax does not include McNabs Island or Eastern Passage; Eastern Passage is a separate port under the jurisdiction of Transport Canada.

With its sheltered, ice-free, deep water harbour, its geographic location, its well developed transportation infrastructure, and its excellent port facilities and services Halifax is a world class port of international repute. From its early fortress days, Halifax has dominated the sea lanes of the Northwest Atlantic. As Canadian overseas trade developed Halifax became an integral part of the National ports system. Trade through the Port of Halifax was, until the late 1960's, very seasonal. Trade to and from Atlantic Canada formed a small year round base load for Halifax and Saint John. In the winter months, when ice conditions prevented traffic movement through St. Lawrence River ports, this traffic to and from the major central Canadian market moved through Halifax and Saint John. However, with the initiation of free ice-breaking services to aid navigation in the St. Lawrence River in the early 1960's the situation changed dramatically. Montreal became a year round port and Halifax lost a substantial volume of winter traffic.

The development in the mid 1960's of container shipping provided a new opportunity for Halifax, with its location on the great circle route, to be the Canadian port for various Europe - Canada - U.S.A. liner services. In the 1970's, the Port of Halifax, through the development of container handling facilities and local initiatives to establish a dedicated container rail service, experienced steady growth and port activity changed from a winter peak/summer low pattern to a balanced year round level. However, in the past several years changes in the levels and patterns of world trade, changes in shipping technology and commercial practices and certain government transportation policies, together with rising surface transportation costs, began to adversely affect the volume of traffic through the port. In view of the importance of the port to both the metropolitan and the provincial economy, any downturn in activity must be viewed with concern.

The 13.3 million metric tons of cargo which moved through the Port of Halifax in 1981 comprised three major components - bulk cargoes, general breakbulk and unitized cargoes.

Bulk cargoes - both liquid and dry - such as hydrocarbons, gypsum, cement, and grain accounted for about 11 million tons or 82% of the total cargo volume moving through the port with hydrocarbons accounting for 60% and dry bulk cargoes about 22%. These bulk cargoes form what are known as "captive trades". Their movement is usually controlled by major national or multi-national corporations or by government agencies, the cargo is shipped in company owned or chartered tonnage, and the cargoes are usually handled through special terminals owned or leased and operated by the corporations themselves. Once their network and patterns of marketing and distribution are established there is little subsequent change. Barring major changes in the supply/demand pattern for the commodities concerned, which is beyond the capability of any port authority to influence, these cargoes are "captive" to the port and will likely remain so. For this reason, this report does not deal with bulk cargoes, with the exception of issues concerning grain shipments which are significantly influenced by government policies. (See Section F.6) This is not meant to infer that the Port of Halifax can be complacent with respect to bulk cargoes nor that it must not always be searching out new business in these areas.

General breakbulk cargoes such as flour and cars, constituting 0.5 million metric tons or 4% of the port total, are usually shipped in chartered tonnage. Government policies concerning flour shipments are dealt with in Section F.6. Car shipments almost all use the CN owned autoport facility which is located outside the NHB boundaries of Halifax Harbour but is included in the Port definition adopted by this Committee.

The remaining 1.8 million metric tons or 14% of the traffic through the port is containerized traffic carried by the liner shipping services which provide a scheduled service similar to a railway or an airline with fixed routes and times. The liner shipping services connect Halifax on a regular basis with nearly one hundred and fifty ports around the world. The frequency and diversity of the services, coupled with the ability of containers to provide safe, economical, transportation from door to door for a vast range of both raw materials and finished products make these liner services essential for the continued prosperity and future development of most sectors of the provincial economy. For this reason the liner services have a far greater significance to the port and the province than their 14% of total port volume would imply.

The ability of the Port of Halifax to retain existing liner services and to attract new services depends primarily on the cargo volume available through the port. At present, the 1.8 million tons per year of container traffic is made up of about 0.4 million tons moving to and from Atlantic region destinations and 1.4 million tons which moves through Halifax between central/western Canadian/U.S. locations and overseas locations. This in transit traffic using the "via Halifax" route is crucial to the Port of Halifax and the provincial economy. The provincial industrial base does not generate sufficient volumes of cargo to support the level and diversity of shipping services available through the port. On the other hand, the provincial industrial base needs the level and diversity of shipping services to address export markets. In order to achieve sufficient cargo volumes to attract the shipping services, the port must rely heavily on in transit cargoes moving between the larger inland market areas of the North American continent and overseas. To obtain this in transit traffic the "via Halifax" route must be competitive with alternative routes via other ports in Canada or the United States.

As an in transit port, Halifax, like its competitors, has both advantages and disadvantages. Halifax is ideally located on the great circle route to serve as a Canadian port of call for any Europe - Canada - U.S. service, the harbour is ice free and requires no dredging and the port has excellent facilities and a reliable labour force. Halifax is connected to major inland markets by a single rail link which, with the significant increases in land transportation costs over the past several years, has eroded Halifax's competitive position. This situation has been further aggravated by certain Federal government policies and actions which have had an adverse effect on the Port of Halifax. At the same time shipping technology is constantly evolving and worldwide trade and trading patterns are changing. All of these have an impact on the Port of Halifax and the Province of Nova Scotia.

As an international world class port, Halifax is a complex amalgam of many diverse interacting elements and disciplines. It is a major nodal point in the multimodal transport chain where the transfer of goods between the different modes of transport takes place. Its effective functioning and prosperity depends on the capability and effectiveness of each of the diverse elements and disciplines which make up the whole. Any shortcomings or imbalances in the capability or effectiveness of one or more of these elements or disciplines can have an adverse chain reaction effect on the whole system. The interacting elements can be broadly categorized under three main headings - physical - commercial - administrative and regulatory.

The physical elements of the port cover such aspects as the state and capacity of the infrastructure (highways, rail trackage, wharves, sheds, airport facilities, etc.)

and the equipment for handling and transporting cargoes (cranes, forklifts, trucks, railroad rolling stock, ships, and aircraft).

The commercial aspects relate to the adequacy and cost effectiveness of the operation and utilization of the physical elements as well as the support services associated therewith such as banking, insurance, shipping agencies, freight forwarders, customs brokerage and so on. An important element in this cost effectiveness aspect is that of labour and management, whether it be for the operation of rail, highway, port or shipping equipment and facilities or the provision of support services.

Administrative and regulatory issues include the policies and resulting regulations of municipal, provincial, and federal governments and their agencies which create the framework within which the physical and commercial elements function. Examples of relevant policies and regulations include municipal taxation, the new Canada Ports Corporation legislation, and the policies of the Maritime Employers Association. Other policies and regulations of national and foreign governments affect other links in the via Halifax route and hence affect Halifax.

The prosperity of the Port of Halifax will be determined to a considerable extent by the level of service and the cost effectiveness of each contributing element or entity that makes up the whole, as well as by the regulatory or policy framework within which each has to operate.

While this report concentrates on Halifax and the role of liner shipping through the Port of Halifax the important and fundamental role of the other ports of Nova Scotia should not be overlooked. These ports have a different function in that they usually handle homogeneous cargoes such as salt, timber, pulp, newsprint, coal or steel products which are indigenous to their immediate hinterland. These products are usually carried in vessels owned or chartered by the producing or consuming companies.

The Port of Halifax is Nova Scotia's national multi-purpose port with the wide range of services needed to provide effective transportation services for a broad spectrum of Nova Scotian industry. In accordance with the Committee's terms of reference this report discusses and analyzes a number of the factors which have affected, and will continue to affect, the success of the Port of Halifax in maintaining and developing its vital shipping services.

B - PORT PROMOTION

B.1 INTRODUCTION

B.2 PORT PROMOTION REPORT

B.3 PRESENT STATUS OF COMMITTEE RECOMMENDATIONS REGARDING THE PORT OF HALIFAX DEVELOPMENT AUTHORITY

B. PORT PROMOTION

B.1 Introduction

The first of the Committee's terms of reference was to examine "the effectiveness of all present efforts to promote the Port of Halifax". The Committee was asked to concentrate initially on this issue and to report its findings to government on a priority basis. The Committee submitted its findings, conclusions and recommendations to the Provincial Government in a report entitled "Port Promotion and Marketing" dated February 26, 1982.

B.2 Port Promotion Report

The following Executive Summary of the report outlines the principal observations and findings. A copy of the complete report can be obtained on request from the Minister of Transportation, Province of Nova Scotia.

> "The Port of Halifax has an economic impact of well over one billion dollars a year on the Halifax Metropolitan area.
>
> The frequency and diversity of shipping services which use the port are essential for the continued prosperity and future development of most sectors of the Provincial economy. Any deterioration in the port and shipping services can severely jeopardize the viability of Provincial fiscal and financial incentives to industry.

However, insufficient volumes of cargo are generated within the Province to maintain the level and diversity of shipping services required. To achieve sufficient cargo volumes, the port must rely heavily on transit cargoes moving between the larger inland market areas of the continent and overseas. To obtain this transit traffic, the "via Halifax" route must be competitive with alternate routes via other ports in Canada or the United States.

Effective promotion and marketing of the port is essential if it is to meet competition from other ports. Likewise, continuing research, monitoring and initiation of appropriate actions is needed to achieve and maintain a competitive edge and to identify and capitalize on new opportunities for the port and the via Halifax route.

The present arrangements for Port Promotion and Development are not satisfactory because: they have been overtaken by events; they are fragmented; there are conflicts of interest; there is lack of coordination; there is a blurred image of demarcation of responsibilities; there is a lack of funds and resources to do an effective job; and Provincial and Municipal leadership and participation is either insufficient or misplaced. The creation of an autonomous Halifax Port Corporation envisaged under the new Ports Act now before Parliament to replace the present NHB structure will not alter the situation.

To rectify these deficiencies the committee recommends that a new body - the Port of Halifax Development Authority (PHDA) - replace the present Halifax Dartmouth Port Commission. This new body would act as the global promotional, marketing and development agency for the entire port complex of the Halifax Metropolitan area. It should have sufficient budget and staff resources to enable it to effectively meet expanded responsibilities. The Provincial Government should be the dominant partner in the new Authority with the Cities of Halifax and Dartmouth, County of Halifax and the Town of Bedford also participating. The Board of the new body should be restricted to a total of 9 members appointed by the participating governments, to serve 3 year terms with one third changing each year. The initial staff requirements would be 1 Director, 4 Professionals and 3 Secretaries with a budget of about $600,000 per annum (representing less than 0.06% of the port's total local economic impact).

> The Provincial Government's involvement in Halicon has outlived its original intent and Halicon's involvement in Halterm places the government in conflict of interest with commercial firms. Because it is undesireable to upset the status quo of three equal partners in Halterm, the Province should leave the Halicon shareholding in Halterm intact but sell its equity in Halicon and earmark these funds for its financial involvement in the new promotional body (PHDA).
>
> The Province should sell its shareholding in Halicon to a suitable buyer as soon as possible. In the meantime, the Province should immediately reduce Halicon to an investment holding company by causing it to immediately cease acting as the promotion and marketing agency for Halterm. Halterm itself should become responsible for this activity."

B.3 Present Status of Committee Recommendations Regarding The Port of Halifax Development Authority

On September 13, 1982, the Premier of the Province of Nova Scotia announced that the government was initiating action to:

1. create a Port of Halifax Development Authority similar to that recommended by the Committee;

2. phase out Halicon as the promotional and marketing agency for container traffic in the port.

The successful completion of these actions will substantially implement the port promotion recommendations of the Committee.

C - INTERNATIONAL CONTAINER SHIPPING TRENDS

C.1 INTRODUCTION

C.2 LINER SHIPPING ROUTE EVOLUTION

C.3 RATIONALIZATION OF SHIPPING SERVICES

C.4 NEW CONSTRUCTION AND CHARACTERISTICS

C.5 EMPLOYMENT OF NEW TONNAGE AND ROUTE STRUCTURE

C.6 INTERNATIONAL AGREEMENTS

C.7 PORT SELECTION AND FACTORS AFFECTING HALIFAX

C.8 CONCLUSIONS AND RECOMMENDATIONS

C. INTERNATIONAL CONTAINER SHIPPING TRENDS

C.1 Introduction

The importance of container shipping to the Port of Halifax and the provincial economy has been established in previous sections of this report. Container shipping and the related roll on/roll off (Ro/Ro) concepts are still relatively new technologies in the shipping world and are still in an evolutionary phase. The future directions of this evolution may have significant impact on the Port of Halifax.

C.2 Liner Shipping Route Evolution

The development in the early 1960's of containers and capital intensive container ships and container handling systems resulted in revolutionary changes in the pattern of world shipping routes. The traditional pattern of general breakbulk cargo liners calling at a large number of ports on a route was envisaged as being replaced by fast, sophisticated fully containerized ships calling only at selected "focal" ports with the containers being collected/distributed from origin/destination by coastal feeder ships or by overland rail and road services.

In some instances, this came to pass, for example on the U.K./Continent - Far East services the "main line" container ships called only at Singapore and Japan. From Singapore cargoes were "fed" to and from Malaysia, Thailand, Burma, and Indonesia. A similar situation prevailed on the UK/Continent, Australasian route. As the use of containers became more widespread more "focal ports" came into being - Hong Kong feeding Taiwan and the Philippines - Colombo feeding the Indian sub-continent and so on.

This concept of "focal ports and feeder services" has changed during the past decade as more countries established main container ports of their own and insisted that the "main line" vessels should call at at least one of their national ports. This came about partly because of trading patterns, partly because of national prestige and partly because countries would not tolerate being at the mercy of a "focal port" outside their own country, thereby placing their trade at the mercy of ports over whose costs and labour situations they had no control. Today the original concept of a limited number of "focal points" has evolved into a situation where a main line service usually includes at least one port in each country it services.

On the North Atlantic, while the first container service initiated by Sea Land used New York and Rotterdam as its two "focal" ports, the North Atlantic liner services in general did not develop with only a single "focal port" on each side of the ocean. However, compared to the pre-container days the number of ports called at by liner shipping services was reduced to a minimum. What is in existence today is almost a cross between the old breakbulk general cargo liner concept and the direct "focal port to focal port and feeder concept". The shipping lines on the North Atlantic trades have had to achieve a balance between the "utilization" rate of their trans-oceanic ships and the number of port calls they make with the cost of "feeding" into a limited number of ports on each side of the ocean. The "feeding" is undertaken by local coastal services and by inland road and rail carriers.

C.3 Rationalization of Shipping Services

High operating costs, mainly for fuel and wages, plus the high capital costs of ships and equipment have had a marked impact on ship size and route patterns. It is a generally accepted criteria that the larger the ship, the less it costs per deadweight ton to construct and operate. However, this is a two edged sword. To operate as a viable proposition a ship has what is termed as "economical load factor", i.e., a combination of volume and type of cargo which will provide enough revenue to offset the capital and operating costs of the vessel on each voyage. The larger the vessel the great the amount of cargo needed to achieve the economical load factor. However, the volume of cargo available on any given route is finite and shippers usually want frequent vessel sailings to meet their trading requirements.

Also of account is the length of the route and the time it takes a ship to carry out a round trip. Thus, if a round trip on a particular route takes a month, then from the shipowners point of view one ship of sufficient size to achieve an economical load factor for the volume/type of cargo offering would be the most economical way to service that route at the lowest possible freight rate. However, few if any shippers can or will tolerate a monthly sailing frequency; therefore, there has to be a compromise with say the shipper accepting a fortnightly service and the ship owner having to operate two smaller and less economical vessels, ergo charging a higher freight rate to compensate for his increased costs.

This, in essence, is the raison d'etre for the present trend to rationalizing shipping services and cargo sharing.

Instead of three of four shipping lines each operating a weekly service on the same route with four smaller ships, the shipping lines agree to each operate the largest possible ship on a monthly set schedule staggered so as to provide a weekly sailing and each shipping line uses space on one of the other lines' vessels in turn for their own cargoes. Thus, the shipping line keeps its own capital and operating costs to a minimum by operating the largest possible ship on the route, and at the same time is able to offer the level and frequency of service demanded by his shippers.

This rationalization of services can take many forms, from space sharing arrangements on each other's ships, to space "chartering", to the operation of "pool" services, or to the formation of consortia whereby several lines of the same or differing nationalities each own their own ships but operate them within the purview of a separate company in which they are all shareholders. The main difference in these arrangements lies in the fact that under the first two arrangements each line solicits cargoes in its own name and in the latter, the cargoes are solicited under the name of the "pool" service or the consortia.

While consortia of shipping lines in the container trades have existed since the first introduction of container services on ocean routes, the other methods of rationalization of services are a comparatively recent phenomenon. As individual shipping lines increased the size and capacity of their vessels to obtain the economy of scale, so the total capacity on a route became excessive and led to rate wars with their attendant losses of revenue to the lines themselves. This, in its turn, led certain shipping lines into some form of rationalization of their route capacity. Other lines have managed to survive and continue operating as separate entities, while some were forced to withdraw. Although shipowners seemingly brought about the over tonnaging and over capacity of routes themselves, the situation has been aggravated by the present downturn in world trade.

C.4 New Construction and Characteristics

In spite of their experiences of the adverse impacts of over tonnage and over capacity, shipowners seem intent on perpetuating the situation. A number of companies are ordering new ships which will have considerably more capacity than those presently in operation and some lines are lengthening existing ships.

The majority of existing trans-oceanic container ships, particularly those on the Trans-Atlantic routes, are in the region of 1,400 to 1,800 TEU [1] capacity with a loaded draught of about 10 metres or 32.8 feet. Some container ships operating on the Trans-Pacific and Far East routes have larger capacities ranging up to a maximum of 3,000 TEU and have operating draughts of 35 feet or more.

The new vessels planned or under construction range from 1,800 TEU to 4,148 TEU with draughts in the 35 foot range. The considerable range of sizes suggests that vessel design is still in an evolutionary phase. The capital cost per container slot for the new construction varies widely. For example Evergreen (2,100 TEU ships) and United States Lines (USL) (4,148 TEU ships) expect per slot costs to be in the range of $13,000/14,000 U.S. while Atlantic Container Lines (ACL) and Barber Blue Sea Lines (BBS) expect their new container ships (2,000 and 2,400 TEU) to cost in the range of $20,000/25,000 U.S. per container slot.

---

[1] Twenty foot Equivalent Unit. A measure of how many twenty foot containers a ship can carry. One forty foot container = 2 TEU's.

The very considerable new capacity to be added in the next few years and the wide variation in capital costs raise questions about how the capacity will be used and how competition will be affected. The injection of considerable "cheap" capacity into the already over capacity N. America/N.W. Europe trade by the Trans-Atlantic legs of planned "round the world" services would have a significant impact.

Most new combined container Ro/Ro ship tonnage is being fitted with "quarter" rather than "stern" ramps; this includes the ACL and BBS ships. A quarter ramp permits the ship to utilize almost any alongside berth and handle its Ro/Ro cargoes direct on to the wharf apron. It removes the necessity of the ship having to use a special Ro/Ro berth or the use of a Link Span (floating landing ramp platform) unless the tidal range is excessive. In this connection, the large tidal range experienced in Saint John is a hinderance to efficient Ro/Ro operations and it is understood that consideration is being given to installing a Link Span at that port in the near future to remedy this problem.

One side effect of some of the larger ships will be their inability to call at certain ports because of draught limitations.

C.4.1 Draught Considerations

It is significant to note that with the introduction of its new vessels American President Lines (APL) is having to spend about $178 million U.S. to enlarge and improve facilities at their U.S. West Coast terminals which includes dredging to accommodate the 10.67 metre draught of the new vessels. This would seem to indicate that vessel size is starting to be a restrictive factor on port selection and it is worth obtaining a perspective on this issue.

If it is allowed that a ship needs at least 1 metre of depth in excess of designed draught then at maximum draught the USL 4,148 TEU ships and the new ACL and APL ships will require about 11.5 metres or 38 feet. The new Hapag Lloyd ships on the Europe/Far East route will require 14 metres or 48 feet of water and this could influence their choice of ports, unless some ports undertake dredging programmes to accommodate them. For instance, the only N.W. European ports capable of handling these Hapag Lloyd ships are Hamburg, Bremen and Antwerp -

no ports in the U.K. or France have the needed depths and in the U.S. there appears to be no ports, other than perhaps Los Angeles or Seattle, that could accommodate them without dredging.

In Montreal, the present depth limitation is 10.7 metres or 35 feet, i.e., ships operating at a draught greater than 10 metres or 32½ feet cannot be accommodated. In this connection, it must also be remembered that the operating draught of ships in fresh water is slightly greater than in salt water. In Halifax, the Fairview Container Pier can accommodate 14 metre or 46 foot draught ships and Halterm can accommodate those with a draught up to 15.2 metres or 50 feet. Saint John can take ships up to 11.2 metres or 37 feet; however, ships' berthing and sailing times in some cases can be affected by the state of the tide. Such delays can be very costly to ship owners.

C.5 Employment of New Tonnage and Route Structure

What is of significance with the various shipping lines' announcements of their new construction programmes are the indications that they give of future employment of the vessels.

Accompanying the trend to increase ship capacity is a trend to new route concepts and it would appear that there could be some significant changes taking place in the not too distant future. In addition to the impact of the increased size of ships, route patterns may also be affected by multimodal trends, changing policies in the United States leading to deregulation of the connecting inland transport systems, changing U.S. attitudes toward Conferences, bilateral shipping arrangements, the UNCTAD[1] Code of Conduct for Liner Conferences and the Convention on the International Multimodal Transport of Goods. As a result it is difficult to predict with any certainty how future route patterns will evolve and how they will have an impact on Halifax.

Both USL and Evergreen have indicated their intention to establish "round the world" (RTW) routes in addition to operating on some shorter direct routes linking certain specific regions. ACL has indicated that its ships will replace others which are presently operating on the U.S./ Canada - N. W. Europe routes. The recent move of ACL's

---

[1] United Nations Conference on Trade and Development.

Montreal traffic to Halifax was based in part on the fact that the new ACL vessels to be introduced in 1984 will not be able to go up the St. Lawrence because of draught limitations.

BBS has indicated that its three new large container/ Ro/Ro vessels will augment its present uni-directional east about RTW routes.

The RTW concept, especially a bi-directional service, is a new development and it remains to be seen what impact it will have on the more "localized" bi-regional routes such as those providing direct services between N.W. Europe and Canada/U.S.

The RTW route concept is worth looking at in a little more detail. It must be borne in mind, however, that in doing so the many and varied international and national intercorporate relationships and arrangements which exist between most shipping lines, coupled with the complexity of shipping economics, their impact on the establishment of route structures, sailing frequencies and so on cannot be given full cognisance in a report of this nature.

At present, there appears to be many differences in the "thinking" behind the approach taken by different shipping lines to the construction of their operating service patterns, ship type, capacity, speed, route structures and sailing frequencies. For instance, BBS operates a uni-directional RTW service, east about. Apparently the bi-directional east and west about RTW route idea was abandoned by BBS, partly because they could not compete with dedicated inter-regional services from the U.S. westward to the Far East and S.E. Asia and partly because of difficulties in repositioning empty containers (for instance, there is a heavy imbalance of container traffic on the Far East/S.E. Asia and the Middle East legs of a bi-directional route). On the other hand, Zim which operates on a very long multi-regional route between the Eastern Mediterranean, Trans-Atlantic to Canada/U.S. East Coast/Caribbean/U.S. West Coast, then Trans-Pacific to the Far East in both directions appears to be able to compete very satisfactorily as an individual line with the dedicated inter-regional U.S. West Coast/Far East services. Zim does not operate as part of a consortium or service consolidation arrangement as do most of the other lines on the Trans-Pacific routes.

The Evergreen situation serves as an illustration and rationale of the bi-directional RTW concept. At present, Evergreen operates on three main routes - one between the Far East/S.E. Asia and N.W. Europe via Suez using seven ships; another between the Far East and the west and east coasts of the United States via Panama using eight ships; and the third between the Far East/ S.E. Asia and the Mediterranean via Suez using seven ships. All these routes are so constructed that they are operated on a ten day sailing frequency, with a round trip time for each vessel of seventy days. Thus, at present, Evergreen is using fifteen vessels to provide the services on its two main or key routes between the Far East/North America and Far East/N.W. Europe at a ten day frequency. The only missing link in a bi-directional RTW route is trans-Atlantic between North America and N.W. Europe.

The rationale behind Evergreen's RTW concept is best illustrated by quoting from a "Company Analysis of Evergreen" which appeared in Lloyds Shipping Economist, July 1982:

> . . . "The RTW sailing pattern means that with only one extra ship, Evergreen will be covering these two trades [1] and offering a two-way North Europe/North America service, all at ten day frequency.
>
> The fifteen ships currently employed on the two key routes by Evergreen have an average capacity rating of 1,278 TEU, and between them offer a total 197,430 two-way slots annually. If tomorrow Evergreen was to add a sixteenth 1,278 TEU vessel and then embark on a RTW in eighty days service strategy, the two sets of eight vessels would each generate an aggregate 139,864 one-way slots spread over three routes. Thus, the Taiwanese carrier (Evergreen) could virtually achieve a 42% increase in its annual slots deployed by circumnavigating the globe with its existing fleet."

The foregoing refers to the use of sixteen present ships with an average capacity of 1,278 TEU each, i.e. a total fleet capacity of 20,448 TEU. However, when the new building programme is completed in 1984, the sixteen ship fleet will have a capacity of 31,800 TEU i.e. an increase of 11,352 TEU or 55.5% more disposable capacity, which on the same basis as outlined in the above quoted extract will translate into 216,240 annual one-way slots spread over the three routes.

---

[1] Far East/North America and Far East/N.W. Europe.

The implications of this additional ten day cycle service on the present over capacitated North America/ N.W. Europe route are considerable. However, it must be borne in mind that not all of the additional one-way slots will necessarily impact on each leg of the RTW route because it is a "total" route and not three separate legs; therefore, there will always be a certain amount of overcarriage from "leg to leg". An update on Evergreen is given in an article from the November 1982 issue of Containerization International (Appendix C-1A).

The extra capacity which will arise from the 14 new USL 4,148 TEU vessels when they enter service in 1984 must also be taken into account. As yet, there is no definite information on whether USL will run a bi-directional RTW route in competition with Evergreen, or whether they will operate uni-directional east about, in competition with BBS.

According to U.S. Lines general counsel, the fourteen new ships "will be used on RTW routes and on routes linking the U.S. East Coast to Europe and to the Far East". It would appear from this statement that whatever the final outcome is, a certain amount of this extra capacity will also impact on the North America/N.W. Europe routes.

The news of the Evergreen and USL building programme and the anticipated employment of the new vessels has already had an impact on the thinking of a number of other shipping lines who foresee the new route concepts as a potential threat. Some of these shipping companies and consortia already operate on routes which although separate, virtually serve most major trade routes. Will the new economics of the RTW concept, if proved successful by Evergreen and USL, lead others into linking their routes together to provide round the world routes? For instance, the Tung Group already services the Far East - N.America/ Canada and the Far East/N.W. Europe routes with its Orient Overseas Container Line (OOCL) services in consortium or consolidated with several other shipping lines or groups. The Tung Group, through Manchester Liners and Dart in consortium and consolidated with CP, is also servicing the U.S. and Canada East Coast/Europe routes. Tung's Manchester Liners also services the U.K./Continent, Mediterranean, Middle East routes. With this grouping, it would not be difficult for the Tung organization to establish a "round the world" service.

If this were to transpire would Tung continue to serve Montreal, use Saint John (OOCL presently calls there), Halifax, or move all Canadian cargoes via New York (and hence save a port call) if that routing were a more cost effective means of serving the central Canadian markets? The possibilities are many and varied.

There are a number of other shipping companies in a similar situation to the Tung Group - British, Scandinavian, W. European, Japanese, Korean, etc. They too operate mostly on bi-regional routes in a mixture of consortia, consolidated services or cargo pooling arrangements, and their bi-regional route structures are usually only lacking a Trans-Atlantic or Trans-Pacific leg, which, if put in place, would place them into the RTW category.

A variation of the RTW concept is the "Horseshoe" route concept recently propounded by the transportation group at the University of Liverpool. Since the U.S. West Coast/ U.S. Gulf Coast leg is one of the lowest traffic legs, and since this leg also involves the expensive and design limiting Panama Canal transit, the Liverpool group proposes a "Horseshoe" route circling the globe from U.S. Gulf Coast eastward to the U.S. West Coast and vice versa. The U.S. West Coast/U.S. Gulf Coast could be served by liner trains as needed. The study, a summary of which entitled "Its All Square" is included in Appendix C-1B, suggests that the economics of the "Horseshoe" route are considerably more attractive than the RTW route.

Of even greater significance that the difference in economics between the RTW and the "Horseshoe" concepts is the basic economic strategy which underlies the whole concept of bi-directional RTW or Horseshoe routes. In essence these are based on achieving very considerable savings in operating costs by the lower per TEU construction cost, by much more fuel efficient engines and much lower crew and costs; and because of route structures, by non duplication of services over certain legs of the voyage as occurs on some of the present bi-regional or shorter multi-regional routes i.e. fewer ships needed to provide required route capacity. Appendix C-1A provides further discussion of this subject.

While the RTW services and the Horseshoe concept are factors to be considered, it must be remembered that there are many major market areas in the world which will always require the shorter direct bi-regional container routes because geographic location would necessitate major and unacceptable diversions from a round the world service and also because of trade flow patterns. For instance, the UK/Continent or North American routes to Africa, South America and Australasia would be difficult to serve effectively and economically, as would the North American/Scandinavian/Baltic trades.

This discussion of the employment of new tonnage and future route structures simply illustrates that routing is the result of a complex interaction of many factors. The ongoing evaluation of the many factors and their complex interaction must be one of the principal functions of the proposed Port of Halifax Development Authority (PHDA) in order to anticipate the market and thus help position Halifax to best respond to a constantly changing world liner shipping scene.

C.6 International Agreements

The economics of time and cost for ships and for connecting inland transport links are obviously key elements in any decision about route structures, ports of call and frequency of service. However, important as the time and cost aspects are, the impact of international and national shipping, transportation and trade regulations and agreements must also be given due recognition.

In particular, the following points presently affect, or are likely to affect in the near future, the route and port selection process:

(a) Specific bilateral trade agreements which may or may not include arrangements/preferences for shipment through one's own national ports rather than those of a neighbouring country.

(b) Specific national or bilateral cargo sharing or restrictive arrangements for national flag shipping lines.

(c) The UNCTAD Code of Conduct for Liner Conferences which provides for cargo sharing agreements between the national shipping lines of trading partners. Although not yet in place, it is expected that the Code will become effective in the near future.

(d) The United Nations Convention on International Multimodal Transport of Goods. As with the UNCTAD Code, this Convention is not yet in effect. It appears that some countries, including the U.S., consider their own national regulations are more appropriate, so there will possibly be some delay and changes before the Convention comes into effect.

(e) The Shipping Conferences Exemption Act (SCEA). This Canadian legislation which, with certain provisions, exempts Shipping Conferences from the Combines Investigation Act is currently under review prior to its due date for re-enactment in March 1984.

At present, only items (a) and (b) above can directly influence whether or not any ports of a given country must be included in a route structure if the shipping lines wishes to compete for or carry the import/export trade of that country. Items (c) and (d) when they come into effect will also have an impact, and may in some instances conflict with items (a) and (b) and, therefore, some adjustments in existing "arrangements" will be necessary.

C.7 Port Selection and Factors Affecting Halifax

The introduction of larger capacity container ships and their employment in multi-regional services is likely to once again emphasize the "focal port" concept. Shipping lines will probably be very selective in deciding which ports to include in their routes and it is unlikely that they will call at more ports than trading patterns and international agreements dictate. This may have significant impacts on both the east and west coast Canadian ports.

For some years now, Seattle has "attracted" Canadian west coast import/export container traffic away from Vancouver. With the two ports being located so close together, it is unlikely that any one shipping line or consortium will want to, or need to, call at both ports. Similarly, on the east coast, the northeastern U.S. ports have complained of diversion of U.S. cargoes to Canadian ports, particularly Montreal. In both cases, the cost effectiveness and efficiency of the connecting inland transport services and of the ports themselves have been the major influencing factors.

Montreal will not be a major port for RTW services or combined Europe/Canada/USA services. The diversion to reach Montreal is too great and present draught limitations on the St. Lawrence will not accommodate the larger ships.

In the case of Halifax, it must be borne in mind that most, if not all, of the likely and potential multi-regional and RTW route operators will have New York as one of the major "hinge pin" ports in their route structure - any bi-regional Trans-Atlantic services are also more than likely to have the same strategy.

The distance between Halifax and New York is only about 615 nautical miles, berth to berth; i.e., close to 36 hours at 18 to 18.5 knots. A diversion into Halifax from the great circle New York/N.W. Europe route is under 50 miles - thus a call at Halifax involves the ship in practically no loss of "en route voyage time" and resolves itself into very little more than the actual time in port, and cost of the stop in Halifax. For all practical purposes, therefore, a call at Halifax should only add a maximum of one day to a one-way Trans-Atlantic voyage, probably less - plus the extra port costs and ship costs. This is less than the diversion involved in using Saint John.

Even though Halifax has this "en route" advantage, it cannot be assumed that the port will automatically qualify as providing sufficient inducement to be included as a port of call in RTW, multi-regional or bi-regional Trans-Atlantic services - especially with the increasing impact of the multimodal door to door transport concept and the emerging deregulation policies for inland transport in the United States. The cost effectiveness of the connecting inland transport links of the "via Halifax" route is therefore critical.

In this connection too, it must be borne in mind that high port costs, high ship operating costs and slower operating speeds make the ship owner extremely conscious of his "round trip" time, frequency of service and turn-around time in ports. Thus, for a given fleet size and capacity a reduction in the number of ports called at, commensurate with achieving an economic load factor for his ships, results in shorter round trip times, lower operating costs, higher sailing frequency and a better vessel utilization rate for the ship owner.

The other part of this equation is the door to door time and costs being offered to shippers for the total multimodal through movement of goods.

This complex issue was highlighted by Mr. Bengt Koch, Managing Director of ACL, in a recent interview published by Containerization International in September 1982. Mr. Koch pointed out that if the Canadian trades continued to stagnate ACL would have to reassess its policy of serving Canada via Montreal and opt instead for additional Halifax port calls. This has now come to pass. However, what is of most significance is that in their future plans they foresee a 35 day voyage schedule replacing their present 28 day schedule. The article then states: -

> . . . "This is a brave step in a market where none of its competitors have round trip times of longer than 28 days, and is one which Koch believes will present his Company with an 'interesting marketing challenge'."

Koch then explains that because ACL does not intend to depart from its direct multi-port call scheduling in order to reduce round voyage times and thereby transits, they face the challenge of trying to explain to customers that their distribution costs and times will not be significantly increased by the change - "We have to persuade shippers to think door to door", he concludes.

He then points out that ACL will aim to provide faster door to door service through transit times to compensate for the slower sea voyage (i.e., by cutting down time on the inland transport sections of the door to door movements).

In this context, Koch feels that by beefing up its U.S. trucking company, Atlantic Coast Express and generally providing shippers with a "faster, more direct operation, will lessen the impact of longer voyage times".

One might then ask of what consequence is this to Halifax. The answer lies in a statement by ZIM Lines that because of train schedules, they have to close cargo in Toronto and Montreal at least three days prior to their Halifax sailing date. This, they consider, is excessive and is in urgent need of improvement. (According to "Via Port of New York" magazine, June 1981 - Containers arrive New York at 8 a.m. on the second morning after departure from Chicago.)

If ACL is looking to speeding up its U.S. inland transport capability to compensate for longer voyage times, how long can its Canadian operations via Halifax continue to remain viable and competitive with a three day inland transit time between closing in Toronto/Montreal and the Halifax sailing date. Unless this can be improved, it would seem that ACL could offer shippers two days less total transit time if they moved all Canadian cargoes over New York- by saving one day on inland transport and one day on voyage time by not calling at Halifax. The one day thus saved on voyage time would also translate into an improved position for them vis-a-vis their U.S. customers. It takes quite a marked difference in cargo handling and inland transport costs between the via Halifax and via New York route to offset two days extra voyage time plus costs of extra port calls at Halifax.

Similar considerations will presumably also come into play by other lines when establishing their RTW or long haul multi-regional route structures. They too will be very "voyage time" and "door to door" time conscious. Thus, not only the high cost, but also the level of service and unduly long inland transit times of CN can be an element of vital importance to the future of Halifax.

The growing impact of mini-landbridge and micro-landbridge concepts in the United States consequent on deregulation of inland transport systems is perhaps best illustrated by APL who recently demonstrated that it can move containers quicker (by almost a week) and cheaper from Asian destinations to the U.S./East Coast markets via the U.S. West Coast ports and "liner trains" than by ship via the Panama Canal with its costly tolls and periodic delays.

If Halifax can develop a cost and time effective mini-landbridge to central/western Canadian and mid-western United States markets then Halifax's natural assets, its harbour and its geographic location on the North Atlantic sea lanes, can be more effectively utilized.

C.8 Conclusions and Recommendations

The worldwide container shipping scene is volatile and dynamic. The current developments in the industry, the result of a complex amalgam of technical, political, economic, and worldwide business factors, create new opportunities for Halifax. In view of the emerging trend to large ships serving multi-regional or RTW routes Halifax, with its geographic position and facilities, is ideally situated to become the only logical eastern Canadian port of call for these services.

To capitalize on these opportunities will require an aggressive marketing program to promote the advantages of Halifax to worldwide shipping lines. Such a program must be based on an educated interpretation of up-to-the minute information on current events and trends in all of the diverse matters affecting shipping and multimodal transportation.

The railway linking Halifax to inland markets will be a critical factor in Halifax's ability to capitalize on the emerging opportunities. Unless these inland links are time and cost effective the multi-regional and RTW routes will serve the Canadian market through New York and eliminate any eastern Canadian port of call.

Canadian National Railways must be constantly made aware of the opportunity to significantly increase the volume of "via Halifax" container traffic and the need to improve the time and cost effectiveness of the rail link if the opportunity is to be realized. CNR would also be a major loser if traffic is lost to New York.

Those concerned with the well-being of the Port of Halifax must constantly monitor the world shipping scene to identify the trends and determine the possible effects on the port. Events of the past year illustrate how rapidly the shipping scene can change. The Port of Halifax Development Authority should play a lead role in the ongoing data collection and data interpretation effort to provide the information needed to identify opportunities and pitfalls.

In the context of RTW services a strong sales and promotional effort must be mounted dealing with those shipping lines operating or considered likely to operate RTW services to ensure these shipping lines are fully aware of the advantages of serving the North American market via the Port of Halifax.

D - CANADIAN NATIONAL RAILWAYS

D.1 INTRODUCTION

D.2 THE HALIFAX-MONTREAL RAIL LINK

D.3 THE OVERLAND ROUTE POTENTIAL

D.4 THE "CAST" INVESTMENT

D.5 CANADIAN NATIONAL RAILWAYS COMMERCIAL INTERESTS AT THE PORT OF HALIFAX

D.6 CONCLUSIONS AND RECOMMENDATIONS

D. CANADIAN NATIONAL RAILWAYS

D.1 Introduction

This section examines Canadian National Railway's role at the Port of Halifax. Rail rates and services are central to the ability of the Port of Halifax to continue to perform successfully as a major commercial seaport and as such are of critical importance to shipping lines serving the Port of Halifax. Rail service, encompassing frequency, reliability and transit times, is reviewed in this section together with comments on railway technology, pricing and rail rates. Other policies of the Canadian Government which have an impact on the movement of rail traffic via the Port of Halifax are commented on.

The Committee clearly sees an opportunity for a substantial increase in rail traffic between Halifax and inland destinations. Canadian National Railway (CNR) has an estimated 70% excess capacity on the Halifax-Montreal rail line and has the ability to incrementally price rail service to induce shipping lines to use this route, thereby increasing profitability.

Serious concerns are expressed about the conflict of interest which CNR has with its Halifax shipping line customers and its own Halifax rail service as a result of Canadian National's involvement in CAST. The CAST issue is of great significance to the Port of Halifax even when viewed in isolation but the examination of Canadian National in this section attempts to place the CAST investment against its proper backdrop of other Federal policies such as free icebreaking and dredging on the St. Lawrence River which magnify the issue.

The performance of CNR is vital to the Port of Halifax and shipping lines serving the port. The concern of Halifax shipping interests with CNR arises from the railways' abuse of its monopoly position at Halifax. CNR's monopoly position is discussed and suggestions are made as to how it can be dealt with. The Committee is concerned with CNR's pricing policy, particularly the ever increasing container rail rates which have been implemented to and from Halifax over the past decade, in contrast with the rebating or discounting of published rail rates on traffic to and from the competitive Port of Montreal. The propensity of Canadian National to engage in activities which reduce and distort competition, as in the case of rebating to CAST and attempts to gain CAST's entry to the North Atlantic Shipping Conferences, is also discussed.

The spectre of a Crown Corporation obstructing the regulatory process and refusing to disclose information which is of great interest to the Province of Nova Scotia is noted.

D.2 The Halifax-Montreal Rail Link

North Atlantic cargo destined to central/western Canada and mid-west United States can land at a number of East Coast ports of entry and then be shipped overland to its final destination. For the Port of Halifax the main overland service link is the railway and the only railway is the CNR. Route selection is usually based on two major factors, rates and service. The impact of adverse changes in railway rates and service on the routing of ocean traffic have been and are continually being experienced by the shipping lines using the Port of Halifax.

In the early part of this century, better facilities and services offered to inland Canadian shippers through American ports, especially New York, resulted in a substantial portion of Canadian overseas traffic using the American routes. This competition led to the integration of Canadian railroads into an export-import parity structure. The objective of the export and import parity, or differential rate structure, was to provide shippers with a relatively equalized total cost (inland rail plus ocean shipping) of transportation via any major eastern Canadian or North East United States port.

At one time, Halifax enjoyed lower liner shipping rates to and from U.K. and northwest European ports than Montreal, reflecting the much shorter distances. With the advent of port equalization structuring involving overseas traffic originating and destined to southwest Ontario and the U.S. mid-west this Halifax advantage was eliminated. The inland export and import rail rates, the other important component of the structure, were either on a parity basis depending upon the port in the system or were differentially related and subject to the increases as authorized from time to time by the U.S. Interstate Commerce Commission. The goal was that the competitive relationship would be maintained on breakbulk traffic. While those export and import rates were usually lower than the local rates that applied to and from the ports in the system, the applicable railway tariffs provided that the shippers were entitled to the local rate plus terminal charges when lower. As a consequence because of shorter hauls of other modes of transport in central Canada the local rates generally emerged as lower than the export-import component. Montreal became the principal port of entry during the summer months and the Maritime ports became the principal ports of entry during the winter months. Later through icebreaking assistance the season of open navigation for the Port of Montreal increased with a corresponding decrease in traffic through the Port of Halifax.

It was only when containerization became a reality in Canada in the late 1960's and a competitive export-import inland rate structure based on the economics of container shipping via Halifax was put in place, that Halifax became a year round national port of significant scale.

The rate structure associated with containers enabled the conference lines to quote the same door-to-door rate for overseas cargo to and from southwestern Ontario and mid-west U.S. regardless of which eastern Canadian port the container moved through. Halifax's location hundreds of miles closer to Europe and a relatively short distance from the great circle route between the Northeast U.S. and Europe provided a saving which enabled shipping lines using Halifax to absorb the rail costs between Halifax and Montreal and remain competitive with those shipping lines using the all water route to Montreal. The inland rail rate is hence a most sensitive cost component and must be kept in balance for the via Halifax route to maintain a competitive edge. Since the 1960's the Halifax-Montreal container rail rates have tripled with the result that Halifax's competitive edge has been seriously eroded. This is a matter of great concern to the Port of Halifax.

As outlined in Section C on International Container Shipping Trends, there are new factors at play in worldwide shipping which could favour the Port of Halifax rather dramatically, perhaps making Halifax the only viable East Coast Canadian container port. In particular, the trend to large containerships, which serve a number of continents and a number of trade routes with the same fleet of ships, would favour the Port of Halifax over Montreal. However, rail service between the Port of Halifax and central Canada and the United States must also use the most modern technology and be cost effective. Otherwise, the Port of Halifax will also be priced out of the Canadian market, causing Canadian overseas traffic to be routed via New York.

Rail rates between Halifax and interior points appear to be struck on CNR's perception of what the market will bear. Container rates charged by CNR have risen year after year with apparent disregard for the commercial realities concerning CNR's customers; i.e., the major container shipping lines serving the Port of Halifax. Rail rates have gone up in apparent compliance with the Railway Act which stipulates that rail rates must be compensatory while Federal Transportation Policies provide free icebreaking and dredging on the St. Lawrence River. One transportation system; i.e., the Halifax system is based on compensatory rates, while a competitive transportation system, i.e. the Montreal system, is heavily subsidized by the same Government which encourages its railroad to implement ever increasing rail rates at Halifax.

It should be made clear that the double standard associated with the simultaneous provision of compensatory rail service linking the Port of Halifax with the interior and free icebreaking and dredging on the St. Lawrence River rests squarely with the Federal Cabinet.

Shipping lines serving the Port of Halifax are concerned with rail service and rail rates. Service refers to frequency, reliability, transit times and cut off times for receiving containers at inland rail heads. Recently with diminishing rail throughput at Halifax some of these factors have been adversely affected. This could develop into a self perpetuating downward spiral involving higher costs, poorer service and a progressive loss of container business.

CNR's container transport technology has not advanced significantly since the early 1970's. The proposed Port of Halifax Development Authority should undertake research regarding railway costs and service and new technology so as to improve the competitive position of the Port of Halifax.

CNR executives advised the Committee that, although the rail line connecting Halifax to Montreal is in excellent physical condition, it is presently utilized to only 30% of its capacity. Normal commercial practice would suggest that the railroad use incremental pricing for Halifax container rail service so as to maximize the throughput and revenue on international container cargo.

At the present time, the container rail rate structure is based on a maximum annual volume of 18,000 TEU per year. Some container shipping lines have advanced the question as to what container rail rates would be on the via Halifax route if, say, 100,000 TEU per year were part of a shipping line proposal. Canadian National Railways' TEU costs should diminish with this additional volume and rates should be proportionately lower. If the economies of scale beyond 18,000 TEU per year were offered to shipping lines prepared to provide larger volumes it would not only make commercial sense to the railroad but it would help volume shippers or a group of shipping lines who collectively could offer a large volume of containers. At present the only way a shipping line or group of lines can benefit from high volumes of cargo in the range of 100,000 TEU is to use their own ships and maximize the sea haul as happened in the case of the St. Lawrence Coordinated Service (Dart Containerline/ CP Ships/Manchester Lines) when it based its operation in Montreal, thereby minimizing rail haul.

This issue should be pursued by the Province of Nova Scotia directly and through the proposed Port of Halifax Development Authority.

It should be made abundantly clear that the Committee considers rail rates and service to be the most obvious and serious problem facing the Port of Halifax at this time. The rail link connecting Halifax and central Canada is of vital importance to the continued viability of the Port of Halifax. It is operated under monopoly conditions by the government owned Canadian National Railway which, in recent years, has elected to engage in high risk offshore adventures, specifically the CAST investment, conflicting directly with the Halifax rail line and with its customers.

D.3 The Overland Route Potential

An area of apparent potential for the "via Halifax" route and for CNR could be the development of overland rail services and special tariffs between Halifax and other container yards located between Toronto and Vancouver, similar to the mini and micro-bridge [1] concepts which are successfully operating in the United States.

While the Committee does not foresee significant benefits accruing to Halifax from the landbridge concept, it does see a potential for developing and promoting the mini and micro-bridge concepts with Halifax being a "base port" for establishing through tariffs rather than as an "add on" over Montreal. With the advent of longer haul multi regional and RTW ocean shipping routes during the next few years, as discussed in Section E.5, it can be expected that such arrangements will become increasingly important in Canada. They will probably be an essential ingredient for inducing shipping lines to include an eastern Canadian port in their RTW and multi regional route structures rather than shipping Canadian cargoes via New York.

---

[1] See "Multimodal Bridges" in glossary for definition of terms.

If Halifax is to realize this potential CNR's promotional policies and tariff structures as regards the "via Halifax" route must be drastically revised. At present, as will be outlined in the following paragraphs, there are too many inequities and lack of foresight in CNR's present policies and arrangements.

CNR publishes a Landbridge tariff between Vancouver and Montreal with an "add on" charge for Halifax. Thus, it costs more for landbridge routing via Halifax than via Montreal and yet the trans Atlantic Shipping Conference rates are the same to both ports. Considering the great distance involved in the trans-continental haul one would expect the Port of Halifax to be equalized with the competitive eastern Canadian/U.S. ports and not penalized with an "add on".

As stated earlier, the Committee understands that little, if any cargo is routed via Landbridge across Canada. Hence it is not so much the importance of the Landbridge tariff which is in question but CNR's policies and attitudes. The same is essentially true about the Mini-Landbridge. In this case the special rates apply between the west coast ports of Portland, Tacoma, Seattle and Vancouver and the

CP/CN container yards at Toronto and Montreal. The rates between both Toronto and Montreal and any of the west coast ports are equalized regardless of differences in distance. But these rates do not extend to any point east of Montreal even with an "add on" charge.

CNR is actively promoting its Landbridge and Minibridge services and its inland rail connections via Vancouver with direct advertising (See Appendix D-1). CNR also issues a promotional and information leaflet for its Import/Export services at the Port of Montreal and its "fast freight service linking the Port of Montreal with all Canadian and United States points". It is true that there is some direct promotion of Autoport, CNR's wholly owned subsidiary in Halifax and, through its one-third shareholding, CNR is associated with the advertising of Halterm. However from enquiries made to the CNR Moncton office, there is no direct and separate promotion of the "via Halifax route" per se. The only promotion of Halifax appears to be its inclusion in the material which CNR puts out concerning other Canadian ports generally.

This leads to the question as to why Halifax is seemingly always an appendage on Montreal as regards rail tariffs. Combined with the lack of promotion and development of the "via Halifax" route to central and western Canada, it gives the impression that the Canada which CN serves and where it perceives its opportunities to be, lies between Montreal and Vancouver.

Prior to its involvement with the CAST Group in 1975 there appeared to be no reason why the "via Halifax" route should not have been a major feature of CN's operational and promotional strategy. If this had been the case then CN might not have felt it necessary to buy into CAST for the reason given in the CN's letter to the C.T.C. dated July 31, 1975 which states

> "It is the judgement of Canadian National Management that unless CN moves now to acquire a participatory interest in a major container service between Canada and Europe, our participation in this form of traffic will deteriorate substantially and probably irreparably." (emphasis added).

Observing that CN already had the complete monopoly on all container traffic through Halifax, the foregoing certainly was not an expression of faith in the port. If anything it supports the impression that its services east of Montreal are a bothersome appendage to their "main rail system" - Montreal and points west thereof.

The Mini-landbridge tariff between container terminals in Montreal/Toronto and Vancouver is a good illustration of the situation where inland routes for trans-Atlantic cargoes via the seaboard Ports of Halifax and Saint John are not given due consideration. If the CNR was inclined to develop and promote the "via Halifax route" it could have extended minibridge beyond Montreal and effected microbridge arrangements and rates to apply between Halifax and container terminals in western Canada and the U.S. mid-west that would be competitive with Montreal and thus more inducive to the shipping lines serving the Port of Halifax. They would also, perhaps, be prevailed upon to advertise and promote Halifax and the "via Halifax route" with the same enthusiasm and on the same direct and separate basis that they presently devote to the "via Montreal" and "via Vancouver" routes, i.e. "Meet the train in Halifax" as well as Vancouver (Appendix D-1 refers).

Thus, it would seem that if the whole hearted cooperation and enthusiastic support of CN could be obtained, there is a good potential to add to the present in transit rail traffic on which Halifax is so dependent by actively promoting the overland route between western Canadian and U.S.A. markets and those in N.W. Europe/Mediterranean/Middle East/Africa as being more cost effective for shippers (cost, level of service and transit time) than the all water routes ex Vancouver via Panama or even over Montreal for other than the N.W. European cargoes where shipping lines are not subject to Conference rate equalization between the two ports as are the U.S. Continent Conference services.

D.4 The "CAST" Investment

One of the major problems presently confronting the Port of Halifax, is the unauthorized financial investment of $61.6 million made by CN in the foreign based CAST Shipping Group.

The CAST Group of Companies started from a small shipping company formed in 1969 by Mr. Frank Narby. It is now a complex group of companies located in a number of countries. The head office and main operating company is located in Switzerland. The CAST Group of businesses include owning and chartering a fleet of ships and operating cargo terminals, trucking fleets and depots. This section of the report will be restricted to the CAST shipping activities between Europe and Eastern Canada.

Since its inception in 1969 CAST has operated as an aggressive competitor on the North Atlantic trade, primarily concerned with bulk cargo (such as grain, coal and ore) and container traffic moving between Canada and Europe. CAST did not join the North Atlantic Shipping Conferences and made significant inroads into the trade by substantially underpricing conference carriers such as Atlantic Container Line, Canadian Pacific Ships, DART Containerline, Hapag Lloyd, and Manchester Liners. CAST had ambitious expansion plans which included attracting United States container traffic particularly from the Detroit-Chicago axis. For the past few years, United States traffic represented approximately 60% of CAST's container business. CAST's expansion plans were financed through borrowings and high risk equity investments of Federal dollars funneled through CN.

In 1975, the principal shareholders in CAST were Mr. Frank Narby (through Dolphin Investment Ltd., Bermuda) and Mr. Donald Webster (through Helix Investments Ltd., Toronto). CAST had various container and bulk vessels on charter operating on the Montreal/Antwerp route and wanted to expand but needed additional capital. At the same time, Dr. Robert Bandeen, President of CN (now President of Crown Life Insurance Company), proposed that CN enter the North Atlantic container shipping business. In 1975, the Canadian Transport Commission (CTC), despite protest and a public hearing, allowed CN to invest $12 Million for an 18 per cent share of the equity in Eurocanadian Shipholdings Ltd., the major company in the CAST Group. Based on the financial performance of CAST, especially in the early 1970's, any equity investment in such a company was very risky, particularly in an industry as volatile as shipping. CN maintained that its acquisition of 18 per cent of CAST was purely an investment and an attempt to attract the container rail traffic from CAST ships calling at Montreal. CN maintained that it was not a hostile move detrimental to the Port of Halifax.

However, the CN investment in CAST made no positive impact on the Canadian economy and is viewed by the Committee as an unproductive offshore adventure resulting only in the diversion of container traffic from one Canadian railroad to another. This capital could have been usefully applied to the CNR system where it would have created jobs and benefitted all Canadians.

CAST undertook a series of significant expansion programs, one of which included the purchase of eight vessels from The Anglo-Nordic Shipping Group in 1980 at a cost of approximately $165 Million. Again, CAST needed additional capital and again CN agreed to invest, this time without prior CTC approval. In 1980 CN invested approximately $42 Million (U.S.) in CAST through purchases of preferred shares. These preferred shares included a conversion option whereby CN could increase its common share equity holdings to 26 per cent. Furthermore CN subscribed to one share issuance in the amount of $33.5 Million (U.S.) exclusively, i.e. without any participation on a pro rata basis by Helix Shipping Limited or Mr. Narby. By now, it became very clear that CN did not have a passive investment in CAST.

1. CN invested Canadian capital dollars in a high risk foreign based enterprise - a misallocation of Canadian resources.

2. CN, after its initial investment of $12 Million in CAST, proceeded to make further investments amounting to $42 Million, authorized by Order In Council but without the required approval of the CTC.

3. CN initially contended that it would not take any management or policy role in CAST. However, contrary to this statement, CN has taken an active role in CAST management and policy directions and has representations on the Board of Eurocanadian Shipholdings Ltd.

In 1982, concurrent with a downturn in shipping caused by a worldwide economic recession, a number of developments occurred which led to a further financial crisis for CAST.

1. CAST had ordered eight large ships for 1982-84 delivery at a total cost of $355 Million. The financing costs of these vessels which began to accrue in 1982 were not able to be met from revenues.

2. CAST began losing money because of the severely depressed state of the bulk trades on which it depends for much of its revenue.

3. During 1982, CAST's container business dropped from an estimated 100,000 TEU to about 50,000 TEU per year.

This financial crisis necessitated a massive reorganization of debt, disposition of assets and revision of debt repayment schedules. In mid 1982, with apparent disregard of its past mistakes, CN management, now headed by Dr. Maurice LeClair, participated in the reorganization of CAST by purchasing the Montreal assets of Task Terminals Ltd. (part of the CAST Group) for about $10 Million (U.S.) and leasing the assets back to CAST. CN, as part of the arrangement, acquired an option to purchase all of the shares of Task Terminals Ltd. for one dollar. At the present time CN has a total "investment" of at least $61.6 Million in CAST plus approximately $10 Million (U.S.) in the Task Terminal assets as well as its option to increase CN ownership in CAST to 75 per cent in 1985. These investments also gave CN an effective veto power on decisions made by the Eurocanadian Board of Directors by requiring that all decisions be unanimous. All of these transactions were made without the approval or apparent knowledge of the Canadian Transport Commission.

In the past, CAST was successful in attracting container business through rate cutting. In mid-1982, facing serious cash flow problems, CAST decided to seek membership in the North Atlantic Shipping Conferences and announced its intention to provide slot charter capacity to the St. Lawrence Coordinated Service (DART Containerline/ Canadian Pacific Ships/Manchester Liners). These arrangements subsequently fell through when an estimated forty CAST personnel, including many senior management personnel, left the Company to form a new non-Conference container line, Sofati Container Line, to compete with CAST. CN, notably Mr. R. C. Franklin, President of CN Enterprises, reportedly played a key role in the abortive attempt to bring CAST into the North Atlantic Shipping Conferences, demonstrating again the fact the CN investment in CAST is not a passive investment.

Container shipping companies view CN's investment in CAST in terms of a railroad acting in competition with them. The CAST investment places CN in a position whereby it has a strong motivation to favour CAST to the detriment of the Port of Halifax. The conflict CN has with its customers and with its own rail service from Halifax as a result of its financial interest in CAST is self evident. This conflict is all the more obvious when it is realized that the President of CN was until recently a member of the Board of Directors of Eurocanadian Shipholdings Ltd. and Intercast S.A.. Dr. Maurice LeClair has been replaced by Mr. R. C. Franklin, President of CN Enterprises on the Eurocanadian Board of Directors and CN has acquired the right to appoint an additional member to the Eurocanadian Board and to the Boards of Directors of some other CAST Companies. Representatives of CN lobbied to get CAST entry to the North Atlantic Shipping Conferences, and CN personnel spent considerable time looking after the financial interests of CAST, as the following quote from the Montreal Gazette of September 30, 1982 illustrates:

> "The CN President said that there has been an intense struggle during the past six months to prevent CAST from collapsing. LeClair has struggled as hard as anybody, spending 10 consecutive days in the London Hotel room, "without even time for a walk," putting together the details of a financial rescue."

CN's investment in CAST is inimical to the interests of the Port of Halifax. This investment has resulted in the diversion of cargo and jobs from the Port of Halifax to Montreal. The CN investment in CAST subsidizes North Atlantic Container rates via the Port of Montreal, enabling CAST to charge rates on North Atlantic cargo which are lower than would otherwise be possible. One witness before the Committee described the situation surrounding the CN investment in CAST as a conundrum where on one hand CN regularly increases Halifax rail rates while simultaneously investing in and subsidizing its customers' competitor - CAST. This in turn enables CAST to cut rates so that Halifax based shipping lines find it difficult to pay the CN rail rates and still be competitive.

CN's investment in CAST not only takes cargo and jobs from the Port of Halifax, transferring them to Montreal, but also reflects a serious negative attitude on behalf of CN's senior management toward the Port of Halifax.

It is a widely held view that CN is not objective in its treatment of the Port of Halifax vis a vis Montreal and statements such as those of former CN President, Dr. Robert Bandeen, in the recent book Montreal - The New Cite [1] support this view convincingly:

> "Bandeen is hopeful that the CN argument (for a Canadian Merchant Marine) going on for several years, will prevail, especially since there is now added strength to it: with the decline in value of the Canadian dollar, foreign shippers would find it attractive to pay their crews here. So, for that matter, "If we get the merchant marine to come to Montreal, and we build on the railways, we've a bright life ahead." says Bandeen, who then pauses and adds: "But I should say outright that I like Montreal." And that is a clue he is eager to provide, his contribution to the evidence that personal reasons, rather than corporate, often motivate chief executive officers." (Emphasis added)

Also, at the very least, the CN investment in CAST indicates a significant insensitivity of the Federal Cabinet regarding the impact of this investment on the Port of Halifax. During the years 1981 and 1982, CN has engaged in deliberate obstruction of the regulatory process using every legal gimmick at its command to avoid or delay disclosure of the facts surrounding its investment in the CAST Group of Companies. This is particularly upsetting when it is appreciated that as a Federal Crown Corporation it would derive some of its equity from Nova Scotia taxpayers. It simultaneously calls into question the usefulness of the CTC which is only now dealing with the purchase by CN of high risk offshore companies. It has not protected the Canadian taxpayer from the misallocation of resources by another agency of the Government of Canada.

---

[1] Clark, G., Montreal - The New Cite, McClelland & Stewart 1982

CN executives have expressed the view that the CAST investment did not influence the departure of Dart Containerline from the Port of Halifax, and that the CN investment in CAST did not affect the Port of Halifax detrimentally. From statements made by Dart Containerline executives in the past, and from conversations and interviews with knowledgeable shipping executives, it is obvious that these views expressed by CN are not consistent with the facts. The CN investment in CAST did influence Dart Containerline in part to leave the Port of Halifax. The investment did impact the Port of Halifax negatively and it did favour Montreal.

There have been indications that the new CN management under the direction of Dr. Maurice LeClair had lost its enthusiasm for investing in high risk shipping ventures, particularly CAST. It has been suggested that Dr. LeClair might be prepared to divest CN of its financial interest in CAST. This position, however, is contradicted by various actions of CN since Dr. LeClair became President. CN has acted on behalf of CAST to obtain entry to the North Atlantic Conferences, and CN under his stewardship actively participated in various financial bail-outs of the CAST Group, one of which yielded CN a 75% purchase option on certain key CAST Companies, another involving the purchase of the assets of Task Terminals Ltd. for $10 Million (U.S.) with an option to purchase all the shares of Task Terminals for one dollar.

It is therefore doubtful as to whether CN management has had a change in attitude and it is difficult to judge to what extent the Province of Nova Scotia can view CN as a good corporate citizen. It is obvious that the Province of Nova Scotia, possibly through the proposed Port of Halifax Development Authority, will have to take a vigilant posture with respect to CN. It is particularly important that an effective port promotional structure be established to maintain this vigilance and to counter hostile actions such as the CN investment in CAST before they occur.

It should be emphasized again that the Federal Cabinet knowingly approved of CN investments in the CAST Shipping Group, even those which were not authorized by the CTC. In the view of the Committee, these acts were reprehensible and have resulted in immeasurable damage to the Port of Halifax. The Committee considers it imperative that the Province of Nova Scotia press on with a program to force the divestiture of CN's interest in the CAST Shipping Group, as this investment is harmful to the Port of Halifax.

D.5 Canadian National Railways Commercial Interest at the Port of Halifax

CN plays a very significant role in the transportation sector of the Port of Halifax. This role includes investments in commercial operations and operation of the only transcontinental rail service from Halifax. These investments include its wholly owned subsidiary (through CNR), Autoport Limited, its 50% ownership in Halifax Industries Limited and its one-third interest in Halterm Limited. Consequently, the Committee emphasizes that CN does play a constructive role in the area and the local and regional personnel are very sympathetic to the needs of the port. Unfortunately, the local development priorities do not seem to coincide with the actions taken by CN's head office.

The CN financial involvement in the three enterprises at Halifax do not compare in magnitude to its involvement in the CAST Group. Furthermore, the Halifax investments clearly are investments in Canada, at least two of which are felt to be profitable, whereas the CAST investment involves very significant risk in a foreign based shipping company which employs few Canadians, reduces the viability of CN's Halifax rail service, and has not been profitable.

Given the monopolistic position which CN has vis a vis rail container traffic to and from Halifax, CN must recognize its responsibility for the development of cost effective transportation services in this area.

D.6 Conclusions and Recommendations

This section has examined various aspects of CN activities and the impact of CN policies and attitudes on the Port of Halifax. Arising from this, it is abundantly clear that the Port of Halifax is dependant for its continued prosperity on the cost effectiveness and level of service provided by CNR. Paradoxically, because of its monopolistic position and its various investments in the Port there is potential for CN to profit greatly by maximizing its efforts to develop and maintain the competitiveness of the via Halifax gateway.

The Committee has the following conclusions and recommendations:

1. The Committee has concluded that the CN involvement in CAST is detrimental to the Port of Halifax and its customers and is not in the interest of the Province of Nova Scotia or Canada and it therefore recommends that CN extricate itself from the CAST Group at

the earliest possible date and refrain from involvement in liner shipping in the future. The Province of Nova Scotia should use all the means at its disposal to affect the divestiture of CN interest in CAST.

2. CN senior management must take a much greater and more constructive role in achieving and maintaining the cost effectiveness of the via Halifax route in Canada'a international trade. The rail aspect of this concept is of utmost importance.

3. CN must make every effort to utilize the estimated 70% excess rail capacity on the Halifax-Montreal rail link through incremental pricing of import/export cargo. The present upper limit of 18,000 TEU per annum for volume discounts should be increased by increments up to 100,000 TEU. Consideration should be given to setting up arrangements whereby all container traffic moving by rail through Halifax would be "pooled" for discount purposes.

4. CN must exercise vigilance with respect to its attitudes, policies, and rates. It must strive to improve rail service between Halifax and interior points by advancing rail technology, improving transit times and lowering costs. Because this matter is of such vital importance, it cannot be left in the hands of CN exclusively. Therefore, the Province of Nova Scotia through the new Port of Halifax Development Authority must ensure this matter is kept under constant review.

5. The Committee is greatly concerned with CNR's monopolistic position at the Port of Halifax. It recommends that the Port of Halifax Development Authority explore ways and means to initiate competitive services to resolve the situation. This could include the possibility of obtaining running rights for Canadian Pacific Rail and the possibility of establishing a company to organize and/or operate dedicated container carrying trains connecting Halifax and interior points.

6. As long as the CN monopoly on Halifax rail service exists it is recommended that the Province of Nova Scotia insist that the CTC be instructed by the Minister of Transport

to be more stringent in its regulation of CN in respect of import/export traffic.

7. In light of recent revelations regarding rebates and de facto acquisitions by CN of interest in other transportation companies and inordinate delays in having acquisitions dealt with by the CTC as exemplified by the CAST acquisition, it is evident that there are serious flaws and limitations in the existing legislation and its enforcement which should be corrected.

8. Changing shipping technology, route structures and commodity flows indicate that there is a trend which may well place both Halifax and U.S. ports in a preferred position to handle Canadian traffic. In view of this, it is incumbent on CN in the national and regional interest, to use all of its resources to ensure that Canadian traffic is not lost to U.S. ports.

9. The Committee has found that Canadian National Railway pricing policy on mini-landbridge and micro-landbridge container services is based on Montreal with add-on charges connecting Halifax with inland points such as Winnipeg and Chicago. At the same time transoceanic shipping rates from Montreal and Halifax are equalized. This policy should be changed.

E - FREE MARINE SERVICES ON THE ST. LAWRENCE RIVER

E.1 INTRODUCTION

E.2 THE HALIFAX/MONTREAL SITUATION

E.3 THE ALL WATER ROUTE TO MONTREAL

E.4 ICEBREAKING COSTS

E.5 DREDGING COSTS

E.6 NAVAID COSTS

E.7 RECOVERY OF COSTS

E.8 IMPACT ON NOVA SCOTIA PORTS

E.9 CONCLUSIONS AND RECOMMENDATIONS

E. FREE MARINE SERVICES ON THE ST. LAWRENCE RIVER

E.1 Introduction

The Federal government policy for "cost recovery" in transportation concerns the recovery of public expenditures for services and facilities provided by the government other than those which have been formalized under special cost sharing agreements, assistance programmes or subsidy arrangements. The government's present commitment to expenditure restraint in a period of rapidly increasing costs, together with increasing demands for more transport systems capacity, have created the necessity for increasing the level of cost recovery for the facilities and services which it provides. Additional background information on the general topic of cost recovery is given in Appendix E-1.

It is not within the scope of this report to examine the pros and cons of whether the government programme for cost recovery is right or wrong or even whether it is good or bad. It is the "impact" of the policy on the Port of Halifax which the Committee addressed. Thus, it is only the aspects of the cost recovery programmes and policies which impact on the competitiveness of the "via Halifax" route versus the "via Montreal" route for transoceanic cargoes moving between overseas market areas (principally those in Europe) and those in central Canada and the U.S. States bordering the Great Lakes. This, in essence, confines the discussion to those aspects of cost recovery which exert an influence on the "economic distance" (time and cost) for shippers using the via Halifax or via Montreal routes.

E.2 The Halifax/Montreal Situation

Basically the situation resolves itself into a comparison of the all water route to Montreal versus the overland rail route via Halifax to Montreal, with the movement of cargo between Montreal and the more western inland market areas being common to both routes. The question of waterborne cargoes which by-pass Montreal and move via the Seaway/Great Lakes system above Montreal are not germane to this discussion.

At present, the ocean freight rate between the U.K./ Continent and Montreal either via Halifax and overland or via the all water St. Lawrence route is the same. The all water route is about 587 nautical or 676 statute miles longer than the transoceanic route to Halifax. This represents about 1½ to 2 days extra steaming time for the ship and therefore adds 3 to 4 days on each round trip. To this must be added an extra ½ day for containers to clear the Montreal port area into the container rail yards.

The overland rail distance from Halifax to the same Montreal rail yards direct is 772 statute miles with an effective transit time of about 2 days. Thus, insofar as the time element is concerned, there is not too much difference between the two routes to the U.K./Continent provided Halifax is the first and last port of call on the route of the transatlantic shipping line in North America.

The sequence of port calls and availability of feeder services in the U.K./Continent area also effects the time element but is not relevant to this discussion as it is a common factor whether the ships use Halifax or Montreal.

In the context of the Halifax versus Montreal situation, if the time factor is of no great significance, the problem resolves itself into the economic aspects of the two routes. Insofar as the shipping lines are concerned, the choice of route at the moment is determined by having to balance the cost of 1½ to 2 days extra steaming time, plus the extra "gulf and river" costs for pilotage, for ice strengthening of ships, including loss of deadweight cargo capacity caused thereby and for additional premiums on marine insurance policies for winter navigation, against the cost of the overland rail haul from Halifax.

However, in the foregoing paragraph, there is one very important cost element not accounted for - that is, the cost of the services and facilities provided by the Federal government for safe navigation into and out of Montreal on a year round basis. Services moreover, some of which are not needed at Halifax and others which are only needed to a very minimal degree compared to those which have to be provided to Montreal. The services and facilities so provided, at no cost to the shipping lines using Montreal, are those for icebreaking, navigation aids and dredging.

Although the recovery of these costs should be part of the government's cost recovery programme and levied as charges on shipping into and out of the gulf and river ports, this is not as yet being done. On the other hand, CN Rail is required to recover its cost for the rail haul between Halifax and Montreal and to charge "compensatory rates".

The cost of the rail service has tripled over the past 15 years and this total cost is charged on the container traffic moving via Halifax. During the same period, as will be seen from the information in the following pages, the costs to the Federal government for the services and facilities which it provides to ensure year round safe navigation to Montreal have also tripled, but this is not reflected in any charges to the traffic using the direct all water route to Montreal.

Thus by having a cost recovery programme in effect on one mode (rail) and not on a competing mode (water) the government is in fact distorting the economics and balance between the two routes in favour of the direct all water Montreal route. Unless and until the government decides to impose a full cost recovery programme for the services and facilities it provides on the all water route, the via Halifax route will remain at an artificially created economic disadvantage.

The foregoing comments have been necessary to provide a perspective to the following discussion on specific aspects and to the more detailed analysis of the costs involved given in Appendices E-2, E-3, and E-4.

E.3 The All Water Route to Montreal

There are many activities connected with the maintenance of safe navigation for ships using the St. Lawrence gulf and river ports on a year round basis. Some, such as ice management and icebreaking are seasonal, others such as dredging, navigational aids, pilotage, towage/salvage services, search and rescue and so on, have to be provided for shipping, on a year round basis. Furthermore, the degree to which these services are required will vary from port to port and hence the amounts charged under any cost recovery programme. would also presumably need to vary from port to port. The all water route to Montreal obviously involves the provision of all these services over the greatest distance.

While this report does not detail the method of calculation and imposition of cost recovery charges, it does attempt to "ball park" these costs which directly benefit the St. Lawrence river ports. To do so, it is necessary to develop ideas as to what proportions of total costs for such services are directly or indirectly of benefit to shipping, how they should be calculated and how charges might be levied for their recovery.

Insofar as this report is concerned, the most contentious aspects of services and activities on which the Federal government has not yet instituted cost recovery programmes for services of direct or indirect benefit to shipping are for icebreaking, ice control, dredging and navigational aids. There are other aspects such as environmental protection, search and rescue, vessel management control, steamship inspection and so on, which are not as significant in the context of this report.

In this connection, it is fully realized that the accent of this discussion centres around the North Atlantic container trades and general breakbulk cargoes and does not examine in detail the impact on the domestic shipping or dry and liquid bulk cargoes using the gulf and river ports.

The government agency which is almost exclusively involved in the provision of services for ensuring year-round safety of navigation is the Coast Guard, functioning within the aegis of the Minister and Department of Transport.

The Coast Guard assumes this responsibility for all shipping while operating within Canadian territorial waters. This starts with their Vessel Traffic Management service which requires all vessels to report when they enter the twelve mile territorial waters limit.

The Canadian Coast Guard is concerned principally with the facilitation of the efficient movement of commercial vessels in Canadian waters, marine environmental protection and marine safety. Its activities include icebreaking, search and rescue, aids to navigation, marine safety, steamship inspection, vessel traffic management, maintenance of the St. Lawrence ship channel, marine pollution surveillance and emergency clean up, pilotage, Arctic re-supply and the operation of marine coastal radio stations.

The Ministerial policy of cost recovery or "user charges" was identified in the Policy Paper presented at the First Ministers' Conference in November 1978 as one of the most important of transport policies. This discussion paper made it clear that the intent of the government is to recover from the user of government provided facilities and services the total costs incurred by government, except where these costs are incurred for special reasons such as constitutional commitments and regional development.

The particular application of this policy to the marine mode was addressed by the Marine Administrator in a paper to the marine industry in February 1979. He gave notice that in addition to total cost recovery by 1980 in the areas where the government already imposed charges, the government intends to recover the expenditures made for aids to navigation, dredging and icebreaking - these last three areas accounting for something like 65% of total net marine expenditures.

Before embarking on an attempt to assess the impact of these charges, it is necessary to attempt a definition of the terms St. Lawrence "river" and "gulf". In response to questions from the Province of Nova Scotia to Transport Canada for CTC hearings into the CP/Dart acquisition, the following statements appear:

> "The term Gulf and St. Lawrence River is taken to mean the main shipping channel from the Gulf to the port of Montreal and is understood to be a single geographic unit - - not two areas such as (1) Gulf and (2) St. Lawrence."

This wording is used in relation to the information provided on costs for icebreaking, dredging and navaids given in the Appendices. However, in the answers on dredging and navaid costs a further statement is added which assumes the western limit of the Gulf to be "a line from Gaspe to the east end of Anticosti to Natashquan (on the north shore). It would seem correct for the purposes of this discussion to assume that everything between this line and Montreal is considered as being "river".

E.4 Icebreaking Costs

Prior to 1964, the Port of Montreal was completely icebound for shipping purposes from about mid-December until about mid-April each year. During these months, the import/export traffic of Montreal and the other river ports was handled through the Ports of Halifax and Saint John. In 1964, the first of the Danish owned icebreaking cargo ships started a winter service into Montreal and, progressing from then, the tonnage of shipping using the port during winter months has dramatically increased from zero in 1963 to six million gross registered tons in 1981.

This increase in tonnage has been achieved, not by icebreaking cargo vessels, but by a deliberate policy of the Federal government to provide icebreaking services that enables shipping to use the Port of Montreal on a year round basis. Moreover, this service is provided at no cost whatsoever to the ports or shipping services which reap the benefits. What it amounts to, in fact, is a direct Federal subsidy for the benefit of the Port of Montreal and which is of great detriment to the Atlantic Provinces in general and the Port of Halifax in particular.

The extent and magnitude of these costs have been a very contentious issue for more than 15 years. Many M.P.s have raised questions in Parliament. Written information has been sought from Transport Canada on numerous occasions by several other bodies and organizations. In general, most information has been given in such a manner that it is difficult to identify component costs or to enable a reasonable breakdown or annual comparison of these costs. An analysis of this issue has been made and it is set out in Appendix E-2.

The following is a summary of the findings. Because of the anomolies which exist in the information made available it is only possible to provide "ball park" figures:

(a) Of the total amounts expended on icebreaking services, 59% is attributable to activities directly related to assisting shipping and 41% to flood control and other purposes.

(b) Of the total amounts expended on icebreaking services, 27% is attributable to activities for shipping and flood control in the river and 73% for these same activities in the gulf.

If these percentages are applied to the total expenditures incurred each year, the "ball park" figures for icebreaking costs which should have been recovered from shipping using the river ports each year since the 1969/70 season are given in the following table.

TABLE E1

Icebreaking and Escorting (No Flood Control)
Costs (Millions of Dollars)

Year	Operations & Maintenance Only			Total Including Depreciation & Interest		
	River	Gulf	Total	River	Gulf	Total
1980/81	1.9	5.1	7.0	2.8	7.7	10.5
79/80	2.00	5.4	7.4	2.8	7.5	10.3
78/79	1.6	4.3	5.9	2.2	5.8	8.0
77/78	1.6	4.2	5.8	1.9	5.0	6.9
76/77	1.4	3.9	5.3	1.8	4.7	6.5
75/76	1.3	3.5	4.8	1.6	4.4	6.0
74/75	1.2	3.1	4.3	1.5	4.0	5.5
73/74	1.0	2.7	3.8	N/A *	N/A	N/A
72/73	0.9	2.4	3.3	N/A	N/A	N/A
71/72	0.8	2.2	3.0	N/A	N/A	N/A
70/71	0.7	2.0	2.7	N/A	N/A	N/A
69/70	0.7	1.8	2.5	N/A	N/A	N/A

*N/A - Not Available.

E.5 Dredging Costs [1]

Costs for dredging fall into the two main categories:

(a) Capital costs for the initial establishment or subsequent improvement (widening or deepening) of channels or approaches to ports and in the immediate vicinity of or alongside berths and other port facilities.

(b) Maintenance costs for any follow up or continuing dredging needed to maintain the required depth or width of channels or approaches to or within ports and their facilities after they have been dredged initially.

In the St. Lawrence river and ports, responsibility for dredging activities rests jointly with the Coast Guard and Department of Public Works as follows:

(a) Coast Guard - all main channels and certain selected areas of the Port of Montreal, to within 100 feet of the wharf face.

---

[1] A more detailed analysis of this subject is given in Appendix E-3.

(b) Public Works - all public berths, approach channels to federal facilities and dredging in certain selected harbours.

Capital Costs

Obviously a great deal of "capital cost" has been incurred over the years to achieve a minimum depth of 35 feet at low water throughout the basic channel from seaward to Montreal. This is nearly ten feet deeper than that required by vessels using the Seaway and therefore must be considered as costs incurred for the benefit of Montreal. Details of the capital costs that have been incurred to achieve this present situation are not available but information has been obtained on three specific instances are indicative of the magnitude of such costs. The three instances are:

1977 - Caps Sante, La Roche and Charles and downstream of Yamachiche Bend. (channel improvements)	$ 942,000
1977 - Approaches to and at the Golden Eagle Refinery at St. Romuald, Quebec (establishment of channel)	19,330,000
1978 - Approaches to, and at, Gros Cacouna, Quebec (establishment of channel)	2,600,000
TOTAL	$22,872,000

In connection with capital costs incurred for initial dredging or subsequent deepening/widening of channels, it must be borne in mind that an extremely high cost is involved to give access to some ports and facilities and that no such costs are involved at others. They are, therefore, as much part of the capital cost of that particular port or facility as are the capital costs for the construction of the port berths and facilities for handling cargoes. It must also be borne in mind that existing channels and approaches may need deepening or widening to accommodate the larger deeper draught ships that are coming into service for the containership trade routes. Thus, Montreal, with its present depth of 35 feet, may well find that it needs to have this increased if these larger containerships are to be accommodated, whereas no such problem or large capital costs are involved in the case of Halifax.

Maintenance Dredging

Here again, specific data is sparse and what is available has some anomalies and ambiguities. However, taking the most conservative situation for maintenance dredging of the channels and approaches from seaward to the main St. Lawrence river ports up to and including Montreal shows a maximum cost of $4,168,000 in 1977 with an annual average cost over the seven years from 1974 to 1980 inclusive of $2,440,143.

In other words, it appears that certain ships - those of deeper draught - using the St. Lawrence river ports benefit by what amounts to a direct average annual federal subsidy of nearly 2.5 million dollars, whereas no such costs are incurred by vessels of even deeper draught using the Port of Halifax.

E.6 Navaid Costs

Navigational Aids include Radio Beacons, Fixed Conventional Aids (lighthouses, leading marks, etc.) and Floating Aids (buoys). Details of these costs are given in Appendix E-4. They have increased from $5.5 million in 1974/75 to $6.8 million in 1980/81 and are applicable to the main channel from seaward to Montreal only.

E.7 Recovery of Costs

For several years now the Federal government has been declaring its intention to introduce "ice dues" and other charges to recover costs for icebreaking, dredging and navaids in the St. Lawrence. To date no action has been taken and the government imposed economic distortion between Halifax and Montreal is becoming greater as time goes on.

It is very evident that by requiring the recovery of costs for services and facilities from users of the Halifax-Montreal rail line and by imposing no recovery of costs for services and facilities provided to users of the St. Lawrence all water route to Montreal, the Federal government is failing to apply the letter and intent of the National Transportation Act. This situation very clearly places the St. Lawrence river ports, particularly Montreal, in a more advantageous and competitive position for container and general cargo traffic than the Maritime ports of Halifax and Saint John.

If, in its wisdom, the Federal government is of the opinion that services provided to shipping in Canadian waters for safety and environmental purposes should not be charged for, so be it. It is agreed that to recover costs from users on an equitable basis for some of the services provided free and available to all users anywhere in Canadian waters or enforced on all such users by law - i.e., vessel traffic management, search and rescue, environmental control, and even navigational aids, would be difficult.

However, costs for services and facilities for ice-breaking and dredging benefit only a limited number of specific ports, areas and users. These costs are readily identifiable, as are the specific users and beneficiaries of such services. There is no reason, therefore, why the costs of providing these should not be recovered from the actual users and beneficiaries according to how much each benefits therefrom.

The Marine Administrator has made a public statement which was reported in the May 1982 "News Bulletin" of March Shipping Limited as follows:

> "Icebreakers in the Seaway
> With respect to the use of icebreakers within the Seaway during the Spring and Fall periods, Mr. Gordon Sinclair advised the meeting that he had submitted a report to the Minister of Transport in November 1981 putting forward recommendations on how to achieve cost recovery of government expenses for icebreakers, navigational aids and dredging in the Seaway. He stated that the report had not as yet been dealt with by the Minister but he expected it to be looked at seriously within the next two weeks. Mr. Sinclair went on to say that his report recognized that a portion of the expenses for these services are certainly government responsibilities and as an indication of the shares involved he stated that 50% user and 50% government would be a close approximation."

The report has been quoted verbatim because it raises some issues of interest. First, the Marine Administrator's statement makes no reference to the Gulf and St. Lawrence river, only to the Seaway - it is understood, however, that such recommendations have also been made. Second, that a 50% split between "user and government" has been used as a close approximation, whereas for the icebreaking aspect only this Committee arrived at a 59% user and 41% government split. While the Committee agrees that there should be a "user"/"government" split for icebreaking charges because of the flood control aspect, it fails to see why there should be any such user/government split for dredging or navaid costs because these services are totally "user" oriented. It should also be noted that these latter items were not included in the Marine Administrator's reported statement.

The Committee therefore is of the opinion that the "user" charges for icebreaking, dredging and navaids must not be merged into one "all inclusive" charge because any one "user" is not necessarily the beneficiary from all three services in all cases and to the same degree. Furthermore, because the seasons and needs are totally different, calculation of costs and dues resulting therefrom from the Seaway must be completely separate from those for the river ports; i.e., Montreal seaward.

Some aspects and thoughts on the cost recovery problem for each sector, icebreaking, dredging and navaids as applicable to the river ports only have been included in Appendices E-2, E-3, and E-4 respectively. These are summarized below:

(a) Icebreaking

(i) Because the Seaway is closed to navigation during the winter months and because icebreaking in the St. Lawrence River and Gulf is undertaken to permit navigation during these same months, the costs for each should be kept separate and recovered from charges levied only on the ships actually benefitting from the service provided.

(ii) Ice dues should be assessed on ships gross registered tonnage or some similar ship related unit and not on cargo tonnage. It is the ship which needs and uses the service, not the cargo.

(iii) Appropriate adjustments of "Ice Dues" to reflect the Ice Classification given to a ship by an International Classification Society (Lloyds, Norsk Veritas, American Bureau, etc) should be incorporated into the Schedule of Charges as is done internationally for Hull & Marine insurance purpose.

(iv) "Ice Dues" should reflect the distance and extent of services used. They should be rated and charged according to "district" or distance travelled upriver, i.e., according to the amount of assistance or service each ship actually uses.

The point has been put forward that icebreaking charges should be recovered as a part of the port dues and fees paid by all shipping using Canadian ports on a year round basis and not restricted to being recovered only from the actual users of the icebreaking services during the winter months. In support of this contention, the situation of snow clearance from run-ways at airports is cited. It is stated that users of airports do not get charged extra "landing fees" during the winter months, but that the cost of run-way snow clearance is recovered as part of standard schedules of landing fees charged on all traffic using an airport on a year round basis.

This argument is not valid because the two cases are entirely different - snow clearance is needed at all airports right across the country and ergo no one airport benefits at the expense of another - it is the same with snow plowing on the highways and railroads. However, with icebreaking for navigation purposes and assistance to shipping, the service is provided to benefit only a few ports over a short period of the year and in most cases has a negative impact on other ports that do not need such services.

In this connection, it is worth noting that the monthly figures of shipping tonnage (and the number of ships) for Montreal show a decline during the ice season. Thus, why should shipping which does not wish to, has no cause to, or cannot use the port during the ice season - or for that matter, shipping which uses Halifax, Saint John, or even Vancouver, - be expected to pay for icebreaking services which only benefit a limited number of users of a few St. Lawrence river and gulf ports for a part of the year?

The application of a winter "surcharge" only on shipping using ports where icebreaking services are needed during the ice season would, according to evidence given at the CTC hearings held at Halifax in December, 1981, into the CP/Dart pooling arrangement, be in accord with the situation prevailing in Finnish ports.

As stated earlier, shipping lines using some ports require, and have to pay for, additional inland transport services - while other lines that use ports that do not involve as much inland transport cost, get access to those ports through icebreaking and dredging services provided at no charge by the Federal government.

A special case can be made for not charging dues for icebreaking and assistance where such services are provided to meet "confederation" requirements. Two instances which fit this situation are the ferry services linking North Sydney/Port Aux Basques and Borden/Tormentine.

(b) Dredging

(i) Capital costs for initial dredging or the subsequent widening or deepening of channels, approaches to and within port facilities which is directly or exclusively carried out for the benefit of any specific port or facility should be allocated as a "capital improvement" cost against that port or facility and be recovered in accordance with the accepted practice for the recovery by government of such capital improvements. For example dredging to directly benefit the Golden Eagle Refinery at St. Romuald, Quebec cost $19.2 million. This should have been charged as a capital improvement charge. Instead it was provided at no cost to the refinery.

(ii) On the other hand, costs for Maintenance dredging which was carried out for the exclusive benefit of any port or facility should be recovered as part of the port dues paid by shipping using that port or facility.

(iii) Both the Capital costs and Maintenance costs for dredging channels or approaches which benefit more than one port or facility should be recovered from all shipping using the channels or approaches in the same manner as pilotage dues.

(iv) Dredging dues should be assessed and rated according to vessel size in a similar manner to "pilotage units"; i.e., only vessels over a certain draught would pay dredging dues on a sliding scale increasing with their draught.

(v) Unlike "Ice Dues" which would be assessed only during the winter months and only on the ships actually benefitting from the services during that period, dredging charges should be levied on a year round basis and charged against ships actually benefitting from the services as outlined in (ii), (iii), and (iv) above.

It is worthy of note that most of the new generation of large trans-oceanic container ships now coming into service, or on order, are of 10.7 metre or 35 foot draught and over in salt water. Allowing that for safety of navigation and ship handling purposes, these ships cannot operate with less that about a metre of water depth greater than their loaded draught, and allowing that they will draw more in fresh water than salt, then the present 10.7 metre or 35 foot depth at low water in the St. Lawrence river and the Port of Montreal will not be sufficient for the new generation ships unless costly dredging is carried out to further deepen the channels, approaches and alongside the container berths. If this dredging is done who should pay for it? The ships could use Halifax without the need for any costly dredging!

E.8 Impact on Nova Scotia Ports

The imposition of charges on shipping for the recovery of costs for icebreaking, dredging and navaids would impact on the ports of Nova Scotia in varying degrees. While all ports would become subject to additional charges for "Light dues" as part of the cost recovery programme for Navaids, these charges would be minimal when compared to those of the St. Lawrence river ports. The nature of the coastline and proximity of deep water drastically reduces the distance over which Navaids are needed for entering and leaving Nova Scotian ports when compared to the river ports. For the same reasons dredging costs in Nova Scotia are virtually non-existent.

Insofar as the icebreaking aspect is concerned, only a few ports are affected by ice conditions and it would appear that most of these operate on a seasonal basis (Pictou, Pugwash, etc.) and are not dependent on icebreaking services for navigation purposes. Others which are on estuaries like Bridgewater, usually only need icebreaking for flood control purposes which is a government responsibility and provided as a free service.

Sydney is the only port where icebreaking services are occasionally necessary for navigation. A study prepared for the Cape Breton Development Corporation by NORDCO LTD. dated April 1981 on Sea Ice Conditions in Sydney Bight shows that ice at Sydney is not a hindrance of any significance to shipping. Devco's Press Release on this study dated May 26, 1982, states, inter alia:

> "....... The study concluded that conditions that could prevent navigation in the harbour area are rare ...." and ".......The study by NORDCO refutes the misinformation that existed over the years regarding the severity of ice conditions through the winter and spring months in Sydney Harbour. It shows that Sydney Harbour can be entered and left throughout the year."

In any case, any icebreaking assistance provided to the Sydney/Port Aux Basques CN Ferry service is a federal responsibility under the terms of Confederation.

It was stated earlier that the tonnage of shipping using Montreal during the winter months - mid-December to April 1 - was zero in 1963 because of navigational hazards caused by ice yet when presumably, icebreaking for flood control was as necessary then as it is today. Less than 20 years later, in 1981, the tonnage of shipping using Montreal during the same period each year - mid-December to April 1 - has reached about 6 million gross registered tons. Making this growth in tonnage possible is the icebreaking service to aid shipping only - not flood control - which from this Committee's calculations (See Appendix E-2) has nearly doubled in cost over the past 6 years from 5.5 million dollars in 1974/75 to $10.5 million in 1980/81.

Thus, it would appear that as a conservative estimate, the impact of the Federal government's failure to institute a cost recovery programme for ice dues is virtually the same as providing shipping with a $10.5 million subsidy to use the river ports rather than Halifax or other Nova Scotia ports. Not only does this artificially distort the economics of the Ports of Halifax and Montreal for ocean shipping but it also impacts transportation in Atlantic Canada. Without the free icebreaking assistance for navigation, the coastal service between Montreal and Newfoundland would not be able to provide a year round service. Such cargoes would then have to revert to the "Confederation" route of North Sydney/ Port Aux Basques or via Halifax. Furthermore, international import/export cargoes for Newfoundland would also tend to move via Halifax and thence by direct coastal feeder service or via North Sydney/Port Aux Basques.

There are also other side effects which arise from this economic distortion. By distorting the transport economic balance of the river and east coast ports through free icebreaking, dredging and navaids and yet requiring the railroad to charge full compensatory rates, the utilization of railroad capacity is much reduced which in turn leads to higher costs and a deterioration of service. This creates a vicious circle whereby the rate and amount of the economic distortion is increased year by year.

A possible further impact which this situation might have in the future could arise from the advent of the new larger container ships on the trans-Atlantic routes. These ships will be too large to navigate up river to Montreal. On the other hand, Halifax has the physical capacity to handle these larger ships. However if the present artificial economic distortion between the river ports and Halifax is not corrected, the railroad service will have deteriorated and become so costly that it will be cheaper to move Canadian import/export cargoes via U.S. ports.

E.9 Conclusions and Recommendations

The foregoing has attempted to assess the order of magnitude of cost to the taxpayer for services which the Federal government provides free to encourage shipping to use the St. Lawrence river ports, in particular Montreal. When analysis of the available information and data revealed discrepancies the lower of the cost figures has been used and thus the assessments of order of magnitude arrived at are on the conservative side.

Examination of the issue of "cost recovery" has indicated that many of the somewhat trite excuses and reasons put forward by the Minister of Transport and by senior Federal civil servants as to why recovery of costs has not yet been achieved are not valid. It appears that the problem is "political".

Insofar as recovery of icebreaking costs are concerned, it appears that these will have a greater impact than those for dredging and navaids because if properly applied any charges or "ice dues" should be levied solely on shipping using the river during the ice season only, i.e., on shipping which benefits from the service provided. Furthermore, the cost of icebreaking services is considerably greater than the costs for maintenance dredging or navaids.

An attempt has been made to indicate the impact on the Port of Halifax and the Province of the present situation arising from the non recovery of costs for the federal services provided for shipping using Montreal. As indicated not only does it create a direct economic distortion, but its side effects are being compounded with each year the situation is allowed to continue.

It must be borne in mind that the imposition of "user pay" charges for icebreaking, dredging and navaids will not dramatically alter the competitive situation. It is but one element, albeit an important one, of the complex series of issues which are discussed in this report which, if vigorously dealt with and actively followed up, should help improve the present adverse situation vis a vis Montreal.

Because the decision to impose ice dues, etc. must be made by the Federal Cabinet on the advice of the Minister of Transport, it is strongly recommended that a campaign of continuing high level political pressure be initiated by the Provincial Government, as well as by the Port of Halifax Development Authority. Additionally, the Provincial Government must also enlist the aid of all Federal members of Parliament from Nova Scotia to exert pressure in Ottawa on every possible occasion (the well being of the port impacts on the total provincial socio-economic situation, not just the Metro area). Further, it is necessary that all concerned in such a campaign are adequately briefed on the nature and scope of the problem.

In addition, it is essential to ensure a high level of provincial input to make the views of the Province known to Transport Canada during the process of formulation of the rate structures. Otherwise, there is a danger that through pressures from Montreal port and shipping circles and from the Quebec government, the conditions and rates for recovery of the costs involved will not be equitably established.

The Committee concludes that the gradual implementation on the St. Lawrence the Federal Government's policy of free icebreaking, dredging, and navaids beginning circa 1964 has resulted not only in an "unreasonable discouragement" in the movement of commodities through the natural year round Port of Halifax but also "prejudicially affects" conditions conducive to the reasonable development of primary and secondary industries in the region indigenous to the Port of Halifax and therefore contrary to the National Transportation Policy.

The Committee, therefore, recommends that the Government of Nova Scotia petition the Federal government to direct the Canadian Transport Commission to exercise its powers under the National Transportation Act Section 22 (1) (h) and other relevant Sections thereof: "to enquire into and advise the government - on measures to develop revenue from the use of transport facilities provided or operated by any government department or agency". In so recommending the Committee considers that it is essential that such an inquiry shall, in the public interest, be of such scope as to include public hearings and receive testimony.

F - SOME OTHER ISSUES WHICH AFFECT THE PORT OF HALIFAX

F.1 INTRODUCTION

F.2 REGULATORY CHANGES IN THE UNITED STATES

F.3 PORT COSTS

F.4 MULTIMODALISM

F.5 OFFSHORE OIL AND GAS

F.6 AT-AND-EAST RATES FOR GRAIN AND FLOUR SHIPMENTS

F.7 MARITIME FREIGHT RATES ACT AND ATLANTIC REGION FREIGHT ASSISTANCE ACT

F.8 SEA/AIR CARGO LINKS

F.9 ARCTIC SUPPLY

F.10 CONCLUSIONS AND RECOMMENDATIONS

F. SOME OTHER ISSUES WHICH AFFECT THE PORT OF HALIFAX

F.1 Introduction

Previous sections have discussed in some detail major issues affecting the Port of Halifax which arise from the Committee's terms of reference. This final section comments on a number of other issues of importance which the Committee also believes may significantly affect the Port of Halifax. The list of topics is by no means complete but is intended to be illustrative of the diversity of local, national, and international issues which can affect the Port of Halifax in its role as a gateway port and a nodal point in the complex network of international multimodal transportation.

F.2 The Effect of Regulatory Changes in the United States

Canada's close trading relationship with the United States makes it vulnerable to repercussions stemming from transport policies and legislation effected in that country. It is hence necessary to maintain a watching brief on trends in U.S. transportation policy in order to assess their impact on Canadian ports.

Prior to the trend to transport deregulation in the United States, which began about 1975, all modes of transportation in the U.S. were shackled by regulations oriented to a monopolistic situation. By comparison, Canada's transport services were materially less regulated than their U.S. counterparts.

The trend in U.S. policy has been to reduce regulation and rely on market competition to achieve the most effective utilization of the various modes of transportation.

Deregulation of the air carriers in the U.S. in 1978 was the first. Two years later the Motor Carrier Act 1980 was passed. Its purpose was:

> "To provide for more effective regulation of motor carriers of property and for other purposes."

While there had been some unsuccessful attempts to effect policy changes apropos of the railroads, it was not until the Staggers Rail Act of 1980 that major steps to deregulate the railroads were effected. The Staggers Act allows competition and the demand for services, to the maximum extends possible, "to establish reasonable rates for transport by rail".

From a Canada/U.S. viewpoint, certain provisions of the Staggers Act, such as the exemption of containers and trailers on flat cars from regulation, have had a material effect on the export-import rate structure arrangements for overseas traffic that had been in place for years between Canada and the United States.

The regulation policies affecting ocean shipping are now under review. Presently in process of being enacted in the United States are Senate Bill S.1593 and its companion Congress Bill H.R. 4374. Both those Bills are directed to implementing "revised regulations of international liner shipping operations". Bill H.R. 4374 has already passed Congress and Bill S.1593 will, in all probability, become law by January 1983.

While competition is the governing criterion in both the Motor Carrier Act and the Staggers Rail Act, such is not the case with the proposed revised regulation of international liner shipping operating in U.S. foreign commerce. The legislative committees found that what was workable in the domestic field, i.e. exposing domestic transportation to the anti-trust laws, have been proven unworkable in international liner shipping. However, notwithstanding the immunity provided common carriers by water, provisions are included to afford protection to shippers, ports, non-conference carriers and others.

The following is a summary of the major substantial changes to existing law:

"Places regulation of international liner shipping under a single law motivated by a unified set of policies and administered by a single agency.

Clarifies and reaffirms the complete anti-trust immunity of ocean liner shipping operators engaged in specified collective activities.

Clarifies the authority for conferences of carriers to establish intermodal rates and services.

Authorizes shippers to form shippers' councils to consult and confer with ocean carriers on general rate levels, rules, practices or services.

Requires any conference utilizing loyalty contracts to grant its members the right to independent action.

Eliminates pre-implementation approval of agreements required to be filed with the F.M.C.; provides for suspension of agreements prior to their taking effect, pending review; procedures for review of agreements; replaces vague standards of review with a precise list of prohibited acts; sets statutory time limits on Commission action; and places the burden of proof squarely on opponents.

Permits ocean carriers to enter loyalty contracts with shippers, if they meet certain specific requirements, without prior approval.

Clarifies the authority of carriers to discount rates for shippers moving a specified volume of cargo over a specified period of time and to enter contracts for rates and services, subject to common carrier obligations of the Act.

Eliminates the F.M.C.'s ability to scrutinize rate levels (except those of controlled carriers), while perserving the F.M.C.'s role as a repository of tariffs and enforcer of tariff adherence.

Prohibits certain practices of conferences designed to drive independent carriers from U.S. trades." [1]

It is evident from this Bill (S1593) and other proposed legislative measures that the United States is taking positive steps to revitalize its maritime industry and to assist States and municipalities to make their ports competitive so that they can effectively go after multimodal overseas traffic.

---

[1] Pages 33-34, Senate Committee Report No. 97-414 Calendar 590, dated May 25, 1982.

The introduction of two other Bills, Bill H.R. 3637 in Congress and its companion Senate Bill S.2414, illustrates further the U.S. motivation to get U.S. foreign commerce moving through U.S. ports.

The purpose of those Bills is to amend the U.S. Shipping Act (1916) in order to:

> "to provide for jurisdiction over common carriers by water engaging in foreign commerce to and from the United States" that are "utilizing ports in nations contiguous to the United States."

The result of the Bill would be to require a shipping line that calls at a Canadian or Mexican port to pick up containers originating in the U.S. to file the tariff for the ocean freight with the Federal Maritime Commission.

There has been strong opposition to these Bills not only from the Canadian Government but also from Senators and Congressmen from the northwest United States. At present the volume of Canadian traffic moving by U.S. northwest ports favors the U.S., whereas the opposite is true in the east. The eastern imbalance in favour of Canada during the first six months of this year has decreased reflecting not only the economic conditions but possibly the effects of more competition from the via U.S. port routes.

The North Atlantic Ports Association in the U.S. has recently strongly criticized the extension in truck operations recently granted by the Interstate Commerce Commission to the CAST Shipping Group. The Association claims that thousands of jobs have been lost by the "Canadian diversion" of U.S. container traffic. A large portion of the job losses, however, are attributed to the higher container port costs in U.S. ports compared to Canadian ports. In this connection the following quotation from dissenting views [1] to H.R. 3637 is illuminating:

> "The hearing by the subcommittee focused solely on the alleged victims of Canadian cargo diverters' competition. Unfortunately there was no analysis of what made this diversion so desireable to American export shippers.
>
> One witness offered the following insight '... costs in the United States have become too high, and many of us share some of the blame for that. Zealous over regulation, lack of competitive tax treatment to provide for port and transportation equipment modernization, excessive operating costs arising under Federal statutes, and failure to accomplish long overdue U.S. harbor improvements are among the reasons for high costs'."

---

[1] Report - The U.S. House of Representatives Committee on Merchant Marine and Fisheries, December 31, 1981, page 25.

The consensus is that the proposed legislation will not be passed. Yet the message is clear - U.S. pressure and competitive action can be expected to increase.

It is important that cognizance is taken of the current U.S. attitude towards encouraging foreign commerce through its ports and connecting inland transport services, particularly as regards the effort to reverse the U.S. "diversions" from Canadian ports.

The U.S. actions clearly indicate that countervailing efforts must be maintained to attract overseas traffic via the Halifax route.

It will be incumbent upon the Port of Halifax Development Authority to keep abreast of all such events that would exert a compelling pull on traffic away from the Port of Halifax, so that all appropriate and necessary action can be initiated in time to avoid any possible adverse effects from materializing.

F.3 Port Costs

The total costs involved in shipping "via" various ports are based on different criteria in different ports. The costs associated with Canada's national ports are generally based on the same criteria although there may be variations in the level of certain dues, charges and assessments. It should be noted that costs to shippers and shipping lines are somewhat less at eastern Canadian ports than at North East U.S. ports. The latest information on Halifax as published by the Shipping Federation of Canada is given in Appendix F-1. In this connection, it must be remembered that under the new Canada Ports Act each port is now a "self sustaining" Crown Corporation. This means that, within the overall port pricing policy of the Canada Ports Corporation, individual ports should be able to exert a greater control over their own cost effectiveness in future than has been the case hitherto. The "self sustaining" policy could also mean higher charges and dues if the port is poorly managed. Further discussion on this topic is contained in Appendix F-2.

Municipal Assessments and Taxes are a significant concern in Halifax. From 1971 onwards, the Port of Halifax has been assessed taxes averaging 20% of the port's operating revenues whereas other ports of comparable size - Saint John and Quebec - have only been paying Municipal Taxes at an average rate of 9% of operating revenues. In some U.S. ports, no taxes are levied on port facilities, i.e., Seattle, while in others like New York and Baltimore, stevedoring and marine terminal operations receive special tax exemptions. Obviously, the tax rate set by the Municipalities (or assessment, which is done by the Province) can exert an influence on port costs and is an issue which needs close scrutiny by the proposed Port of Halifax Development Authority.

It is obviously necessary that every item listed in Appendix F-1 be kept under scrutiny to ensure that they are always kept to the lowest possible levels commensurate with good service. The legitimacy and method of recovery of costs or assessing dues for some services needs continuing surveillance to ensure that (a) the services provided are essential and (b) that the method of recovery - i.e. application of dues - has the least negative impact on the shipping lines and cargo moving through the port. This also applies to what might be termed peripheral charges and others that can creep in from time to time. All of these collectively add to the total cost of moving cargo via a particular port. Illustrative of this are items such as inland terminal charges; rail terminal and switching charges, ship to ship transhipment charges (feeder service cargoes), gate charges, manpower royalties and so on.

The total cost of moving cargo via any port is one of the significant features that will determine the viability of that port. It is hence essential that the new Port of Halifax Development Authority closely monitor these costs for both Halifax and for competing ports.

F.4 Multimodalism

The growing acceptance by shippers of the "origin to destination" or "door to door" rates on through Bills of Lading and the movement of goods by multimodal transport operators, whether they operate one or more modes of transport or are only "forwarders", are changing the nature of transportation thinking.

Shipping lines, freight forwarders and shippers are moving away from the "port to port" concept of ocean shipping and the "total cost of transportation from origin to destination" is becoming the dominant factor in routing cargo. The port is now an integral part of a total transport chain and as such it has to be concerned with any matters which can affect any other links in its total transportation chain. Events elsewhere in the chain can often significantly influence the effectiveness of a through route via one port over another.

The Committee is most conscious of the fact that the Port of Halifax is very dependent on "in transit" traffic to make it a viable port of call for the liner shipping services which are also essential for the development and prosperity of the regional economy. It is also conscious that routes via U.S. ports are a constant competitive threat to routes via Canadian ports and that in trying to achieve a parity and fairness of treatment for Halifax with Montreal insofar as Federal government policies and other matters are concerned the overall economic balance must not be tilted in favour of the via U.S. port routes. The discussion on trends in shipping technology and route structures in Section C highlights how such a situation might evolve, especially the reference to Atlantic Container Line in that Section.

At the moment it is the liner shipping companies that seemingly dominate the routing of cargoes in multimodal transport on the Canada/U.S. - UK/Continent routes. The shipping lines determine which ports they will use and in many instances which inland transport routes and carriers will form part of their multimodal chain. In the extreme, if a shipping line can offer shippers cheaper and/or faster door to door movement of goods on a through bill of lading via a U.S. port, and possibly at the same time maximize its own portion of the "through rate", traffic will gravitate to that route and be lost to Canadian inland transport carriers and ports. This also means that a greater portion of the freight costs have to be paid in foreign currency.

Multimodal traffic will normally gravitate to the most cost effective route and even if traffic does not gravitate to a via U.S. port/inland transport route, the shipping lines, because of consolidation or pooling arrangements, can cause an undue concentration of traffic through one Canadian port to the detriment of others and thus affect regional development prospects. This effect is further aggravated when vertical integration between the inland rail carriers and the shipping lines is permitted as has happened in the CN/CAST and CP/Dart/ML situations.

It could be argued that there are other operators involved in multimodal transport operations who can provide the same "door to door" service for shippers as are offered by the offshore shipping lines. However, both major Canadian multimodal transport corporations, CN and CP, are tied into specific Trans-Atlantic shipping organizations - CN with CAST and CP with Dart/Manchester. Also CP is tied in with Dart operating out of New York.

Thus, if either the CN or CP offers a "door to door" service on the Trans-Atlantic routes their choice of routes, ports, or ability to negotiate with other ocean carriers such as Hapag Lloyd or ACL is non-existent unless they compete against their own ship operating interests. In fact, if either of these two major inland carriers - the only ones able to move containers by rail - enter the international multimodal transport arena in a big way, their corporate ties with specific shipping lines virtually creates a combine or monopoly situation against which other shipping lines will find it hard to compete unless they ship via U.S. ports and U.S. inland carriers. The recent disclosure of CN's special rebates to CAST traffic through Montreal is illustrative of this situation.

If, instead of using the shipping line agent, the shipper places his reliance on a "freight forwarder" or on a non-vehicle operating common carrier (NVOCC) who will select the most cost effective choice of route and carrier combination for him, the situation is not much improved. The freight forwarder or NVOCC will obviously strive his utmost to provide a shipper with a more cost effective multimodal routing and carrier combination than his competitors. However in this case, the constraints on choice of routing are determined by the cost effectiveness of the inland transport links, the costs of moving cargo through a given port and the transoceanic shipping services available at that port which also service the most cost effective combination of port and inland routing on the other side of the ocean.

Here again the inhibiting effect of permitting vertical integration between shipping lines and the nations only inland rail carriers, who also have extensive trucking interests, plus not only a nationwide, but an international network of sales agencies, becomes apparent. Being almost entirely dependent for the cost effectiveness of the "via Halifax" route on CNR (which gives special rebates to its shipping line partner) places the Port of Halifax in a disadvantaged position to compete for traffic against Montreal or the U.S. east coast ports.

Another aspect related to the multimodal or door to door concept which could be a problem is concerned with the "direct shipment" clauses in Canada's bilateral Trade Agreements. A government review of those shipments not routed directly through Canadian ports during a 3½ year period, 1973 to 1976 indicated that only 15% or less of annual Canadian cargo tonnage was routed through U.S. ports and that most of this was imports which enjoyed no British Preferential Customs tariff rates. With the phasing out of the preferential tariffs it appears that the Federal government no longer feels that "direct shipment" clauses are needed and in fact they might hamper other aspects of trade agreements.

This could cause problems for Halifax. For example Columbus Line, which presently uses Halifax as the east coast turnaround port on its Canadian/U.S./Australasian route, could use New York as its northern most turnaround port and ship Canadian cargoes overland through that port. This would save the line five or six days on their present round voyage time. It would also mean that exporters/importers in Nova Scotia would have no direct access by ship to the Australian/New Zealand markets.

Placed in context with: (1) some of the possible trends in shipping technology and route structures discussed in Section C; (2) the multimodal aspects outlined above; (3) the probable impact of the UNCTAD Code and the growing trend toward bilateral shipping arrangements (Canada has virtually no liner shipping capability to be "bilateral" with); and, (4) the deregulation of transport systems in the United States and their new aggressive merchant marine policy, the need for "direct shipment" clause in trade agreements or similar legislation may become a subject of considerable importance to the Province and Halifax in the not too distant future.

Multimodalism and door to door rates for shippers are the current trends in container movements. The proposed PHDA must strive to ensure that the Port of Halifax remains an effective nodal point in the evolving transportation networks. Control of one or more of these networks by one or both of Canada's railways could result in the undue concentration of Canadian container traffic in one port, and the possible shift to U.S. ports by other lines presently competing for Canadian trade.

F.5 Offshore Oil and Gas

The impact of offshore oil and gas on the Province of Nova Scotia and the Port of Halifax in particular is already significant. Mobil Oil Limited and Shell Canada Resources Limited have established offshore oil supply bases at the Port of Halifax and other oil companies are considering doing so. This will further affect port traffic in a positive way. Offshore oil exploration and production are important to the economic well being of the metropolitan Halifax community in such obvious ways as direct and indirect employment but in the context of this report the significant factor is the impact of offshore oil and gas activity on liner shipping services. Liner shipping companies are now carrying steel pipe and other oil related cargoes, adding to the inducement to continue calling at the Port of Halifax. Import cargoes for the offshore have the potential of attracting other liner services not calling at the port at the present time. In addition the Port of Halifax has established a prominent role in supplying offshore materials for exploration and future development off Newfoundland.

Coastal shipping services presently connecting the Port of Halifax with Newfoundland benefit from offshore exploration and help attract trans-shipment cargo from overseas origins destined for Newfoundland.

The impact of the offshore oil and gas exploration and development on shipping through the Port of Halifax is similar in magnitude to a major import/export industry. It is a matter of major commercial interest to shipping lines serving the Port of Halifax on various world trade routes and represents another major advantage for the Port. It will help to ensure the prosperity of the Port of Halifax in the coming decades.

F.6 At-and-East Rates for Grain and Flour Shipments

The so-called At-and-East rate structure on export grain and flour had its origins in the first quarter of this century when rates for grain and flour shipped through eastern Canadian ports had to meet competition from U.S. lake routes principally via Buffalo, N.Y. to New York, N.Y. For many years the competitive relationship of the major ports was maintained by Canadian and U.S. railways through their rate structures. With the opening of the St. Lawrence Seaway in 1959 competition from American ports via Buffalo ended. The Canadian railways, who had claimed they were losing money on the eastern grain and flour shipments, moved to increase rates. Effective in 1960 the Federal government froze the At-and-East grain rates and in 1966 the flour rates and agreed to pay the railways the difference between these rates and appropriate compensatory rates as determined by the Canadian Transport Commission. The 1967 Railway Act embodied the At-and-East assistance on export grain and flour "for the purpose of encouraging the continued use of the eastern ports for the export of grain and flour".[1]

---

[1] Introduction to Subsection 2, Section 272, Railway Act 1967.

Today the At-and-East assistance is a key element in the export of grain and flour through eastern ports and Halifax in particular. The Canadian beneficiaries of the subsidized movement of grain and flour include:

1. prairie winter grain producers
2. Great Lakes grain elevators
3. 28 flour mills in Western and Eastern Canada milling flour for export (30% of Canadian milling is for export)
4. Railways receiving compensatory rates for grain and flour movements
5. Grain elevators at Saint John and Halifax.

At-and-East assistance payments in 1980 totalled $28.5 million. In future it is expected that Canadian flour exports will decline in view of intense international competition and the emergence of domestic milling capacity in developing countries.

Since 1975 several unsuccessful efforts have been made to repeal Section 272 of the Railway Act and hence eliminate the At-and-East assistance. The issue is now dormant but could be revived subsequent to or in conjunction with revision of the western "Crow's Nest" rates.

In 1980 the Halifax grain elevators handled 406,000 tons of grain, 80% of which was received by rail and benefitted from the At-and-East assistance. Also in 1980, 234,000 tons of assisted flour moved over the Halifax docks. All of the flour came by rail and benefitted from the At-and-East assistance. It is estimated that the grain and flour movements in 1981 generated approximately 55 man-years of employment in the grain elevators and a range of 100-125 man-years of employment on the docks. These movements and the employment generated therefrom would not exist without the At-and-East program. It is also probable that the Halifax grain elevators would be forced to close if the At-and-East program were terminated.

In addition to the direct employment impact, the At-and-East program and hence the grain elevators in Halifax have several spin-off benefits:

1. The Dover Flour Mill in Halifax is dependent upon the N.H.B. grain elevator for grain storage. The elimination of this storage would have serious consequences for the mill.

2. The presence of the grain elevator provides a capability to bring domestic grain and feeds by water to Halifax and distribute therefrom by truck to Maritime outlets. This creates

effective completion for domestic rail shipments from central Canada and consequently has a restraining impact on prices.

In summary the At-and-East assistance program benefits many elements in the grain and flour export trade through eastern Canadian ports, ranging from the western farmer to the Ports of Halifax and Saint John. While the issue of reducing or eliminating the At-and-East assistance is presently dormant, it is probable it will arise again once the much thornier issue of the "Crow's Nest" rates is resolved. In 1977 the Canadian National Millers Association in a presentation to the House of Commons Committee considering the continuance of the assistance stated:

> "This subsidy has been effective in assisting the milling industry, supporting industries, the wheat producers of Western Canada, and the economics of the Maritime Provinces. It has generated benefits throughout the entire economy".

The Committee concurs with this conclusion.

F.7 Maritime Freight Rates Act and Atlantic Region Freight Assistance Act

The Maritime Freight Rates (MFR) Act and the Atlantic Region Freight Assistance (ARFA) Act apply to the export movement of a selected list of commodities (set forth in orders of the Canadian Transport Commission), originating inside the so called "select territory" [1], comprising the Maritime Provinces and eastern Quebec.

The Acts do not apply to export traffic originating at points in Canada outside the "select territory". It does apply on export traffic originating in the territory and moving through its ports.

The MFRA Act relates to rail traffic. The ARFA Act applies to truck and vessel movements by operators certified by the C.T.C.

---

[1] The Acts define the territory - as the lines of railways within the Provinces of New Brunswick, Nova Scotia, Prince Edward Island and Quebec extending to Diamond Junction and Levis, Quebec; for the certified trucker - the Atlantic Provinces and "that portion of the Province of Quebec that is south of the St. Lawrence River and east of Quebec Highway 23, being the highway connecting Levis in Quebec with Route 201 in the State of Maine".

Basically, the assistance under the MFRA Act was 20% of the normal rates and the assistance to certified truckers was 17½% under the ARFA Act. Following previous reductions the assistance was reduced to 12½%, effective on April 1, 1982, and will be further reduced to 10% on April 1, 1983. These reductions were made by orders of the Governor-in-Council under Section 5 of the ARFA Act.

A recent study on intra assistance in Atlantic Canada under the MFR and ARFA Acts has recommended a review of the assistance plan to determine its effectiveness for the purposes for which it was intended.

In summary, the assistance under the Acts does not exert any influence in inducing central and western Canadian traffic to move via the Halifax route but they do have some beneficial impact on export traffic originating in the Atlantic Region.

F.8 Sea/Air Cargo Links

The increasing acceptance of multimodalism and the "total cost of distribution" concepts by shippers opens doors for a "total" port to develop its traffic potential by pursuing the promotion of the Sea/Air movement of certain cargoes.

Although this is by no means a new opportunity for Halifax - CANAC Distribution Ltd. operated its first air service from Halifax to the U.S. West Coast via Montreal in late 1975 - it does seem to have fallen into disuse and to have been overlooked in the past few years.

The rationale for the initial establishment of Sea Wing, the intermodal container service of CANAC Distribution Ltd. of Montreal was to provide shippers who found all surface transportation i.e. road or rail and sea, too slow for their needs, but who were unable to bear the cost of all air cargo transportation. CANAC responsed to their needs with a service positioned between "all air" and "all surface" in terms of both speed and costs.

The present status of Sea Wing and CANAC Distribution Ltd., which is, or was, one of the many companies wholly owned and operated by Canadian National Railways, is not readily evident. However the concept is illustrative of a potential opportunity to attract additional traffic to move through the "total" Port of Halifax, particularly since Air Canada has plans for increasing and upgrading the cargo handling facilities at Halifax airport.

When considering any Sea/Air interfaces in Halifax the impact of Federal policies and actions must be taken into consideration, i.e., that the direct Canada/UK/ Continent Conference shipping services operating out of Montreal have direct corporate relationships with the two major inland carriers CP and CN - that the government had need to bolster traffic through Mirabel and has already provided certain customs privileges to that airport which are not available at others.

F.9 Arctic Supply

The main Canadian re-supply of fuel and stores to remote sites in the Eastern Arctic is carried out annually under the title of Eastern Arctic Sealift. The 1981 operation was conducted by the Fleet Systems Branch of the Canadian Coast Guard, under the authority of Treasury Board (T.B. 768638, February 14, 1980). The Treasury Board granted a mandate to the Minister of Transport to act as Federal Coordinator for the annual Eastern Arctic Sealift for calendar years 1980 and 1981.

One member of this Committee had discussions in Ottawa with the Coordinator of these operations Mr. L. Forrest, an officer of the Coast Guard Fleet Systems (Operations) Division. Arising from these discussions, it appears that the operation is coordinated with the United States operations to supply their bases in Greenland and the Eastern Arctic. The U.S. operations are coordinated in Ogdensburg, N.Y. and the Canadian operations in Montreal. It also appears that Montreal is selected as the coordination base for assembling the stores and supplies and loading the ships without any consideration for Halifax.

Details of the 1981 operation are given in the report, TP 2506 (1981), Report of Arctic Sealift, 1981 issued by the Canadian Coast Guard.

From the discussions held in Ottawa, it appears that once the matter is placed in the hands of the Coast Guard Coordinator there is little that they can do to change the venue. Discussions to try and achieve a change of venue from Montreal to Halifax would seemingly need to be directed to the Chairman of the Advisory Committee on Northern Development (ACND). This Group has a transport committee and the key person is the Director General of Government Industry and International Relations, Transport Canada.

The Committee concludes that Maritime suppliers and the Port of Halifax are essentially ruled out of the Arctic supply business by the Government of Canada. This matter should be rectified and the Port of Halifax should be examined closely as having the potential to supply the Arctic through suppliers in the Atlantic Region.

F.10 Conclusions and Recommendations

This section has attempted to bring together a number of diverse topics which can have an impact on the future prosperity of the Port of Halifax. The list of topics is by no means complete but it does illustrate that in this evolutionary period of transportation technology and methodology the port can be affected by many actions and policies of various governments and other bodies, actions which may not at first seem to relate to the port. A key role of the Port of Halifax Development Authority will be to monitor these and other issues which can affect the port and initiate actions to take advantage of the opportunities they present or to overcome the roadblocks they may place in the path of the Port of Halifax.

With the exception of the issue of regulatory change in the United States all of the issues discussed in this section come within the purview of Federal government departments (including Transport, Industry, Trade and Commerce and the Canadian Transport Commission), municipal governments, or other bodies recognized by government such as the Canadian Shippers Council, The

Shipping Federation of Canada, and the Maritime Employers Association. These latter organizations not only have a working role in the complex fabric of international transportation but also they exert an influence on the Federal government in the policy making process. For the sake of completeness some information on these bodies and on the Atlantic Provinces Transportation Commission is given in Appendices F-3 to F-4 inclusive. The new Port of Halifax Development Authority will have to work with these bodies in effecting change and hence be aware of their strengths and weaknesses.

The success of the Port of Halifax will depend to a considerable extent on its ability to be constantly responsive to a complex and constantly changing international multimodal transportation scene. This is the challenge facing the new PHDA and other Port of Halifax authorities.

GLOSSARY OF TERMS

At-and-East Rate	Statutory assisted rates applicable on railway movement of export grain and flour via Eastern Canadian ports.
Breakbulk	Cargo which is shipped, handled and stowed piece-meal, or as separate and individual items, usually in packing cases, crates, drums, barrels, sacks or other appropriate packaging.
Bulk Cargo	Goods moved in bulk which are not packed or packaged in any way but are loaded directly into the vessel or vehicle, e.g. grain, iron ore, potash, sulphur, crude oil.
Compensatory Rate	A rate which recovers all variable costs and makes a contribution to fixed costs.
Conference Rates	The rates and conditions which a Shipping Conference establishes for the carriage of specific cargoes by its member shipping lines.
Containerized Cargo	Merchandise enclosed in a permanent, reusable, weathertight shipping conveyance to increase the security of the cargo, reduce damage, and facilitate handling and transhipment.
Incremental Pricing	When a carrier operates with excess capacity, e.g. is capable of handling more freight than normally is caused by the system, then the carrier can add to its contribution to overhead by pricing to obtain traffic in such a way that the price reflects only the additional or incremental costs associated with the additional traffic plus a contribution over that level of cost.

International Multimodal Transport	The carriage of goods by at least two different modes of transport on the basis of a multimodal transport contract from a place in one country at which the goods are taken in charge by the multimodal transport operator to a place designated for delivery situated in a different country.
Landbridge	See under "Multimodal Bridges".
Liner Trades	Ships which are operated on a fixed route calling at specified ports in a set sequence and at regular time intervals. Such services may be operated as part of a Conference or independant thereof.
Microbridge or Micro-landbridge	See under "Multimodal Bridges".
Minibridge or Mini-landbridge	See under "Multimodal Bridges".
Multimodal "Bridges"	Also known as Intermodal in U.S. Includes 3 sets of circumstances Landbridge, Minibridge and Microbridge. All have several similarities such as: single factor rates, single "through" bill of lading and single carrier tariffs. Landbridge - The direct through movement of cargo from port of origin to port of destination using an overland link or bridge to connect two over water routes. Is an alternative to the normal direct all water port to port route. Example: Japan/UK cargo can be routed overland via USSR or overland via USA as opposed to the direct all sea routes, via Suez or via Panama.

	Minibridge or Mini-landbridge - The direct through movement of cargo from port of origin to port of destination but using an overland link or bridge via a 3rd port to shorten the all sea route. Example: Japan/US east coast port cargo can be routed overland via west coast port as opposed to the all sea route via Panama.
	Microbridge or Micro-landbridge - The direct through movement of cargo from port of origin over water, thence via rail; road or inland waterway to inland point of destination and vice versa. Example: UK port to Chicago direct via New York.
Shipper	A person, or entity who has entered into, or who demonstrates an intention to enter into, a contractual or other arrangement with a Conference or Shipping Line, or with a truck, rail, or aircraft operating company or a non-vehicle operating common carrier, for the movement of goods in which he has a beneficial interest.
Shipping Conference, Liner Conference, or Conference	A group of two or more vessel operating carriers which provides international liner services for the carriage of cargo on a particular route or routes within specified geographical limits and which has an agreement or arrangement, whatever its nature, within the framework of which they operate under uniform or common freight rates and any other agreed conditions with respect to the provision of liner services.
Slot Charter	A contract between a containership operator and a second party for a certain number of container slots, or spaces to be allocated each voyage on a recurring basis.

TEU	Unit indicating the capacity of a containership in twenty foot equivalent units. For example a container vessel providing space for 800 containers of 20 foot length and 400 containers of 40 foot length is described as a 1,600 TEU vessel.
Unitized Cargo	Cargo in containers or piggyback, on pallet or skids, etc. The term is employed to distinguish it from bulk and breakbulk general cargo.

SELECTED BIBLIOGRAPHY

1. Arthur D. Little, Inc. Feasibility of Developing a Transportation Gateway for North America at Halifax. 80830. January, 1978.

2. Canada. Coastguard. Report on Eastern Arctic Sealift 1981. Department of Transport TP 2506. Ottawa. 1981.

3. Canada. Parliament. National Transportation Act. 1967.

4. --------. Shipping Conference Exemption Act. 1979.

5. --------. Railway Act. 1970.

6. --------. Combined Investigation Act. 1975.

7. --------. House of Commons. Bill C-42 Canada Ports Act. 1982.

8. --------. Royal Commission on Transportation - Volume I, March 1961, Volume 2, December 1961.

9. --------. Royal Commission on Transportation. February 1951.

10. --------. Minutes of House of Commons Committee on Transport meeting. December 18, 1980 - 21.37.

11. --------. Minutes of House of Commons Committee on Transport meeting. April 9, 1981 - 30.4.

12. --------. House of Commons. Official Report of Debates. July 24, 1975 - Question No. 2847, and December 11, 1975 - Question No. 3583.

13. --------. House of Commons. Official Report of Debates. Replies to Questions.
    No. 1145, November 19, 1976
    No. 2351, April 20, 1977
    No. 2356, April 20, 1977
    No. 729, November 7, 1977
    No. 2236, March 12, 1978

14. Canada. Transport Canada. Canadian Freight Transportation System Performance & Issues - A Discussion Paper. August 1981.

15. Canadian National Annual Report. Montreal: C.N., 1980 and 1981.

16. Centre for Development Projects. The Economic Impact of the Port of Halifax. Halifax: Dalhousie University, September, 1979.

17. Canadian Transport Commission Research Branch. International Liner Shipping and Canadian Trade. Ottawa: 1979.

18. --------. Cargo Reservation and Liner Conference Shipping Serving Canada. 1979.

19. Clark, G. Montreal - The New Cite, McClelland & Stewart, 1982.

20. DPA Consulting Limited. Halifax-Dartmouth Regional Development Plan Review. Policy Review Component Study 13, Halifax-Dartmouth Regional Development Plan Review, 1981.

21. Halifax Dartmouth Port Committee. Report to Province of Nova Scotia Executive Council on Port Promotion and Marketing. Halifax: Queen's Printer, February 26, 1982.

22. Haritos, Z. Transportation User Charges: A Federal Perspective. Canadian Transport Research Forum Annual Conference, 1979.

23. Matheson, Rand H. Working Paper on the Incidence and Impact of the "At-and-East" Export Rate Freeze on Grain and Flour from Origins as defined in Section 272 of the Railway Act to Eastern Ports. November 2, 1982.

24. --------. Working Paper on the Significance of Inland Transportation in the Movement of Overseas Traffic via the Port of Halifax. November 2, 1982.

25. Nordco Limited. Sea Ice Conditions in Sydney Bight. Sydney, Cape Breton Development Corporation, April 1981.

26. Strategic Policy Branch. Foreign Influence and Control in Canadian Transportation. Transport Canada, 1980.

27. Stevenson & Kellogg et al. Port of Halifax - Strategic Development Plan. Halifax: National Harbours Board. Project Number 1263. February 1980.

28. U.S.A. Dept. of Transportation. U.S. Exports & Imports Trans-shipped via Canadian Ports. Washington, March 1982.

29. University of Toronto/York University. Research Report No. 48 - Marine Transport Policy Project. May 1978.

30. Water Transport Committee. Decision WTC 16-81 in the matter of Section 27 of the National Transportation Act re: certain financial transactions involving CN and its commercial partners in the CAST Group of Companies. Ottawa: National Transportation Commission, October 13, 1981.

31. --------. Decision WTC 16-82 in the matter of certain financial transactions involving CN and its commercial partners in the CAST Group of Companies. September 28, 1982.

32. --------. Decision WTC 10-75 in the matter of objections to the proposed acquisition of a minority interest in the CAST Group of Companies by CN. September 24, 1975.

33. --------. Decision WTC 2-32, in the matter of objections filed pursuant to Section 27 of the NTA re: proposed acquisition of interests by Canadian Pacific Limited in Dart Container Line Company Limited and in St. Lawrence River containerized freight coordination service. March 15, 1982.

34. --------. Public hearing Questions from Nova Scotia Department of Transportation to Transport Canada and Answers thereto In the Matter of Costs of Icebreaking Services and Dredging in the Gulf and St. Lawrence River. Halifax: June, 1981.

34. United Nations. Conference on Trade and Development. Shipping Committee Documents.

35. --------. International Conventions relating to Shipping Conferences and Multimodal Transport.

ARTICLES AND PERIODICALS

1. *Containerization International*. Various 1982 issues,
2. *Container News*. Various issues 1982.
3. *U.K. Freight News*. Various issues 1982.
4. *Lloyd's Shipping Economist*. Various issues 1982.
5. *Seatrade*. Various issues 1982.
6. *Shipping World and Shipbuilder*. Various issues in 1982.
7. *Transport 2000*. July/August 1982.
8. *Monthly Port Bulletins and Port handbooks* from New York, Seattle, Philadelphia, Baltimore, Boston - Vancouver, Montreal, Toronto, Saint John and Halifax

Volume

2

HALIFAX DARTMOUTH PORT COMMITTEE

FINAL REPORT TO THE

PROVINCE OF NOVA SCOTIA EXECUTIVE COUNCIL

ON

ISSUES AFFECTING THE PORT OF HALIFAX

DECEMBER 30, 1982

HALIFAX, N.S.

VOLUME II - APPENDICES

HALIFAX DARTMOUTH PORT COMMITTEE

FINAL REPORT ON THE ISSUES AFFECTING THE PORT OF HALIFAX

VOLUME II - APPENDICES

TABLE OF CONTENTS

1-1 LIST OF PEOPLE INTERVIEWED

C-1 C-1A EVERGREEN'S EVOLVING GLOBAL STRATEGY UNFOLDS.
C-1B ROUND THE WORLD SERVICES: IT'S ALL SQUARE.

D-1 THE OVERLAND ROUTE POTENTIAL

E-1 COST RECOVERY POLICY

E-2 ICEBREAKING COSTS

E-3 DREDGING COSTS

E-4 NAVAID COSTS

F-1 ELEMENTS OF HALIFAX PORT COSTS

F-2 PORT CHARGES IN CANADA

F-3 SEA/AIR LINKS

F-4 THE SHIPPING FEDERATION OF CANADA

F-5 THE CANADIAN SHIPPERS' COUNCIL

F-6 THE MARITIME EMPLOYERS ASSOCIATION

F-7 ATLANTIC PROVINCES TRANSPORTATION COMMISSION

APPENDIX 1 -1

LIST OF PEOPLE INTERVIEWED	REPRESENTING
Mr. G. H. Blaikie	Executive Director, Halifax Dartmouth Port Commission
Mr. Victor E. Bayne	President, Great Eastern Shipping Co.
Mr. R. A. Kaye	Director of Planning & Development, National Harbours Board - Halifax
Mr. G. E. Simmons	Chairman, Halifax Port Authority Branch Manager, Saguenay Shipping Ltd.
Mr. Bryce Fisher	General Manager, Halifax - Cerescorp Inc.
Mr. G. E. Etienne	Executive Director of Administration, Department of Development
Mr. Paul Calda	City Manager - Halifax
Mr. Bernard Smith	Financial Manager - City of Halifax
Mr. J. W. E. Mingo	Chairman, Halifax Dartmouth Port Commission
Mr. D. W. Blair	Vice-President, Atlantic Region, C.N.R.
Mr. P. A. Preville	Vice-President, Clarke Transport Canada Inc.
Mr. B. A. Doherty	Vice-President, Clarke Transport Canada Inc.
Mr. R. V. Beck	General Manager, National Harbours Board - Halifax
Mr. David Bellefontaine	Financial Officer, National Harbours Board - Halifax
Mr. E. H. Howard	President, Halicon & Halterm Ltd.
Mr. C. R. Baxter	Director, Halicon
Mr. B. H. M. Jones	Director, Halicon

APPENDIX 1-1 (Cont'd)

LIST OF PEOPLE INTERVIEWED	REPRESENTING
Mr. Cliff Moir	City Manager, Dartmouth
Mr. H. I. Mathers	President, I. H. Mathers & Son Ltd.
Mr. Gordon Reid	Halifax Manager, Zim Container Service
Mr. C. R. Worthington	Chairman, Halifax District Committee
Mr. A. Andrews	Shipping Federation of Canada
Mr. A. M. Curren	Shipping Federation of Canada
Mr. Aage Roren	Shipping Federation of Canada
Mr. Ken Meech	Municipal Clerk, Halifax County
Ms. Valerie Spencer	Senior Planner, Halifax County
Mr. Dan English	Municipal Clerk, Town of Bedford
Mr. Barry Zwicker	Planning Officer, Town of Bedford
Mr. Greg Evans	Solicitor, Department of Attorney General
Mr. Gordon Sinclair	Marine Administrator, Transport Canada
Dr. Stephen Weyman	Member of the National Harbours Board
Mr. Fred Hanson	Flour Co-Ordinator, Canadian Millers Association
Mr. A. Trepanier	Grain Elevator Superintendent, National Harbours Board - Halifax

APPENDIX 1-1(Cont'd)

LIST OF PEOPLE INTERVIEWED	REPRESENTING
Mr. C. L. Weckman	Vice-President and General Manager, Dover Mills
Mr. R. E. Lawless	President, C. N. Rail
Mr. Rupert J. Tingley	President, C. N. Marine
Mr. James L. Thom	President, Montreal Shipping Company
Captain Gilbert Nilsson	Vice-President, Barber Steamship Lines (Canada) Inc.
Mr. Raphael Kochav	President, Zim Israel Navigation Company (Canada) Limited
Captain Karsten Lemke	Manager of Operations, Zim Israel Navigation Company (Canada) Limited

APPENDIX C - 1

Two articles extracted from November 1982 issue of "Containerisation International".

C-1A Evergreen's Evolving Global Strategy Unfolds.

C-1B Round the World Services: It's All Square.

Evergreen's evolving global strategy unfolds

Appendix C-1A

Driven by a seemingly insatiable desire to achieve the ultimate in operating economies and a lower per slot cost than its competitors, Evergreen is now awaiting delivery of no less than 41,000TEU of new slots for its round the world service set to start in April 1984. Just how Evergreen appears to be consistently able to satisfy its hunger for new tonnage, without apparently straining its financial fabric, is something that intrigues its rivals, as does its evolving round the world strategy. After talks with chairman Chang Yung-fa as he passed through London recently, Jane R C Boyes examines his fundamentally simple, but none the less fascinating, approach to realising his goals for Evergreen

At a time when depression and recession are the favourite conversation pieces of the chief executive officers of many container carriers, and when rationalisation is of necessity a policy being pursued by many a prudent operator, Evergreen Line's impressive US $630 million investment in new ships and boxes shines like some welcoming light amid the gathering gloom, or alternatively appears to be some far fetched folly. Indeed, at first glance this multi-million dollar package, and the Taiwanese carrier's plans for two round the world services spanning the globe both eastabout and westabout at 10-day intervals, appear to be too good to be true.

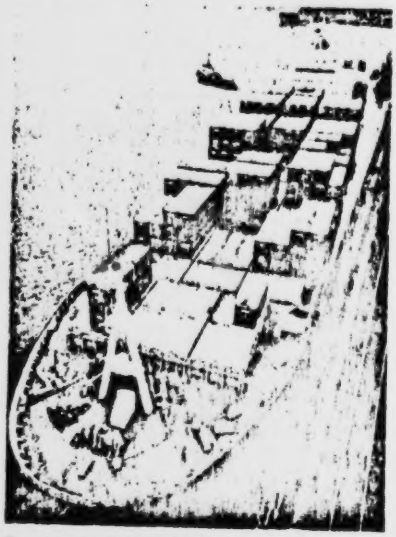
Not surprisingly then, there have been those who doubted the operator's commitment to carrying its plans through. Such cynics believe that chairman Chang Yung-fa's March 1982 announcement of his apparently ambitious bombshell was merely some elaborate, even devious, kite flying exercise on the part of the Taiwanese line. In reality nothing now appears to be further from the truth.

The savings which Evergreen aims to achieve from the operation, and the relatively modest additional investments it will incur in overheads (barring the vessels of course), make the step such a logical and obviously simple one for the line to take that it is difficult to see how it could resist such an option having once placed the orders for new vessels.

Although the expansion programme will enable Evergreen to enter another major container trade, the transatlantic, and also offers it a number of interesting opportunities to compete in markets such as the US/Mid-East route, its all important benefit in the eyes of Chang is the operating economies he hopes to realise. Contrary to the popular wisdom of some European and US shipping circles, the chairman does not appear to be set on achieving global hegemony of the container scene. Neither is he after the dubious status of being the world's largest container operator.

Rather, he is at pains to stress that the newbuilding programme and the round the world service will achieve some measure of rationalisation for his company. Older, smaller vessels will be sold off to make way for newer tonnage, whilst at the same time providing a useful boost to corporate cash flow. Moreover, Chang maintains that in certain key sectors, such as the Europe/Far East and transpacific trades, Evergreen will ultimately be offering fewer slots than it has provided historically.

But for all the chairman's modesty, Evergreen's $630 million (a total figure supplied by Chang, which includes container purchases as well as newbuildings) investment in 16 × 2,240TEU, 21-knot 'G' types, two 1,810TEU, 23-knot 'L' types and three 514TEU, 14-knot feeders, is impressive. When delivery of the 21 ships is completed in October 1984 (see Table 1) Evergreen will have added another 41,002TEU to its fleet.



Evergreen will be retaining its 'L' types

If it were to retain all of its existing tonnage as well, this would give the line an owned fleet (it currently has over 4,000TEU of slots chartered in on six linehaul ships and one feeder) of 65,498TEU. This is a total which, on the basis of sheer slot capacity alone, would move it to the top of the ownership/operating league of container carriers.

Fortuitously for its rivals though, and for Evergreen's bank balance, the chairman is planning to sell at least 16,212TEU of vessel capacity over the next two years. Chang reveals that five vessels, *Evers Handsome* and *Humanity* (both 680TEU and 17 knots) and *Greens Fortune*, *Forward* and *Forever* (19 knots and 956TEU), built in 1976 and 1975 respectively in the case of the smaller ships, and in 1978-79 in the case of the larger trio, will be disposed of first.

Then as the new vessels are phased in he plans to successively sell the line's 'V' and 'S' class tonnage. The former consists of 6 × 1,214TEU ships and one of 1,174TEU. With speeds of 23 knots they were built between 1977-79 (*ie Evers Valiant*, *Victory*, *Voyager*, *Valor*, *Value*, *Vital*, and *Vigor*). The 'S' types (*Evers Spring*, *Summit*, *Superb* and *Shine*) are smaller (878TEU), slower (20 knots) and older, having been constructed in 1975-76.

The sale of these assets, besides netting Evergreen a useful cash flow while its purchase of the 'G's, 'L's and feeders goes through, will on present form leave it with a fleet capacity of 49,286TEU. This is assuming of course that Chang does not decide to order still more newbuildings. This is always a possibility as he pursues his strategy of maintaining a youthful, fuel efficient fleet to achieve the operating economies he so eagerly seeks.

In fact, with his round the world service vessel requirements now taken care of, Chang is currently examining the possibility of building ro-ro/containerships. Ideas put forward by the chairman for such tonnage (Chang always takes a close personal interest in the design of his company's vessels) have already been passed to Evergreen's naval architects.

Reluctant to be drawn on the specifics of such ships, the design of which is still very much in his head, Chang predictably asserts that the vessels will have to work out cheaper than those currently being built for Atlantic Container Line (ACL) (in the region of $53-55 million per 2,300TEU ship) and Barber Blue Sea (BBS—about $66.6 million per 2,400TEU vessel), if Evergreen is to consider ordering them.

Aiming to employ such tonnage on trades to/from developing countries, Chang is determined that whatever design his naval architects come up with should be even more flexible than the current generation of new ro-ros. He appears to be aiming for a

Table 1: *Delivery schedule for Evergreen Line's 'G' and 'L' types and three feeders; as of October 1, 1982*

vessel	builder	yard no	scheduled delivery date	registry
Ever Guard	IHI*	2816	June 1983	Panamanian
Ever Guide	IHI*	2817	Sep 1983	Panamanian
Ever Going	IHI*	2818	Oct 1983	Panamanian
Ever Grade	IHI*	2819	Feb 1984	Panamanian
Ever Giant	IHI*	2826	Apr 1984	Panamanian
Ever Grace	IHI*	2827	Jun 1984	Panamanian
Ever Glory	Onomichi**	310	Jan 1984	Panamanian
Ever Globe	Onomichi**	311	May 1984	Panamanian
Ever Greet	Onomichi**	312	Jul 1984	Panamanian
Ever Grand	Onomichi**	313	Nov 1984	Panamanian
Ever Good	CSBC†	295	Apr 1984	Taiwanese
Ever Gold	CSBC†	296	May 1984	Taiwanese
Ever Goal	CSBC†	297	Jun 1984	Taiwanese
Ever Glow	CSBC†	298	Aug 1984	Taiwanese
Ever Glad	CSBC†	299	Aug 1984	Taiwanese
Ever Glut	CSBC†	300	Oct 1984	Taiwanese
Ever Leading	CSBC†	171	May 1983	Liberian
Ever Light	CSBC†	172	Aug 1983	Liberian
Ever Breeze	Hakodate††	720	Jan 1984	Panamanian
Ever Bridge	Hakodate††	721	Feb 1984	Panamanian
Ever Better	Hakodate††	722	Feb 1984	Panamanian

*Notes: *Ishikawajima Harima Heavy Industries, Japan; **Onomichi Shipbuilding Co, Japan; †China Shipbuilding Corporation, Taiwan; ††Hakodate Dock, Japan.*

vessel able to undertake a full ro-ro or full container role, but without the resulting loss of capacity (especially on the box side) that sometimes results from such flexibility. As to the timing of orders for such units, Chang is unspecific. However, his line's requirement could be sooner rather than later, as it is presently examining the feasibility of a number of service options to run parallel to the round the world schedule.

With a confidence that speaks volumes for the very personal way in which he runs Evergreen, whilst at the same time indicating the degree of planning that has already gone into the operation, Chang calmly names the *actual* day when he aims to start the round the world service. It is April 5, 1984. This is six months before all of the 'G' types will have been delivered (see Table 1), but with these vessels coming on stream from Far East yards in very quick succession through the summer of 1984, Evergreen reckons to be able to maintain the operation with a mix of 'G's augmented by 'L's initially.

Ultimately the 16 'G' class units will circumnavigate the globe every 80 days to provide sailings every 10 days both eastabout and westabout. The start of the new operation will signal the end of the carrier's current Europe/Far East and transpacific main line connections.

Present planning provides for Evergreen's existing range of Far East ports to be served (*ie* Busan, Tokyo, Osaka, Keelung, Kaohsiung, Hong Kong and Singapore). Calls will be made in the Mid East (Jeddah), the Mediterranean (Limassol and Leghorn), at its current range of north European ports (*ie* Hamburg, Rotterdam, Felixstowe, and Le Havre), the US East Coast (it now serves New York, Baltimore, Charleston), Balboa, Panama and Los Angeles. All of these ports would be called direct every 10 days, but additional coverage would be provided by at least six feeders.

Three would operate over Singapore to Bangkok, Malaysia (Port Kelang is now served direct on the Europe/Far East run) and Manila. From Balboa two relays would call at a range of Caribbean and Central American destinations, and one over the Cypriot port of Limassol (its facilities are to be boosted to meet Evergreen's needs) would go to Lattakia, Beirut, Port Said and Alexandria. As an aside Chang notes that there is a great deal of freight moving to Egypt from the Far East.

Such a strategy calls for more than the three 514TEU feeders (*Evers Breeze, Bridge* and *Better*) which Evergreen has ordered at a cost of $7 million per vessel from Hakodate Dock, Japan. And, as of writing it was uncertain whether Evergreen would opt to sell the two 522TEU, 19-knot, nine-year-old ships (*Evers Pioneer* and *Promoter*) now deployed within its south east Asia service and replace them with newbuilds, keep them, or charter in/build new feeders to meet its relay requirements.

Clearly both the eastabout and westabout routeings pose all manner of interesting and potentially lucrative loading options for Evergreen. Nevertheless it is clear that on the eastabout voyage the crucial legs will be: Far East to US West and East Coasts (with minibridge to the US Gulf); Far East to Caribbean and Central America; US to North Europe and Mediterranean; North Europe to Red Sea; North Europe to Far East; and Mediterranean to Far East. Assuming the transatlantic market remains depressed, then Evergreen could pick up useful loads between the Caribbean/Central America and North Europe/Mediterranean. In neither direction will it serve the Europe/Far East/Europe trades via the US.

Conversely westabout the key sectors will be: Far East to Red Sea; Far East to Mediterranean; Far East to North Europe; Red Sea to North Europe; North Europe to US East Coast (minibridge to Gulf); North Europe to US West Coast; US East Coast to Far East; US West Coast (minibridge from US Gulf) to Far East; Central America/Caribbean to Far East. Once again it might also seek some Europe to Central America/Caribbean traffic.

Given the differing transit time needs and port scheduling requirements of these various sectors, Evergreen will have an interesting task in areas such as the Far East and North Europe in achieving a port rotation that will satisfy the differing priorities of both the European and American trades. More specifically its current US West Coast and East Coast services, although offering a similar range of Korean, Japanese and Taiwanese ports, as well as Hong Kong, to the European service, do not necessarily schedule the ports in a similar sequence.

Likewise in North Europe, Evergreen could well find that its current Hamburg, Felixstowe, Rotterdam, Antwerp, Le Havre rotation, although suited to the demands of the Europe/Far East/Europe trade, may not slot in so well to westabout and eastabout round the world links which are also seeking to meet transatlantic market needs. A differing set of market requirements might also explain the hesitation of the line in specifying its US Atlantic Coast port calls for the new service.

From Evergreen's point of view, the beauty and compelling logic of the eastabout and westabout links is that they enable it to serve trades and markets in which it is already well established by virtue of its existing services. At the time of writing these are as follows:

- Far East to California (Los Angeles and San Francisco) and back, every week with four 878TEU 'S' types and two 496TEU charters
- Far East to Panama and US East Coast and back, every 10 days with four 'V' types (3 × 1,214TEU and 1 × 1,174TEU) and two charters of 926TEU
- Far East to North Europe, via Jeddah, and back, every 10 days with three 1,214TEU 'V' types and four 1,810TEU 'L' types
- Far East to Mediterranean, via Jeddah, and back, about every 10 days with three 956TEU 'F' types, two 680TEU 'H' types and two 496TEU charters
- Taiwan/south-east Asia, every 10 days with two 522TEU 'P' types

Thus the only prime market in which Evergreen will be a newcomer is the transatlantic. Even so, accommodating the needs of this area will not add greatly to its overheads since it is already well established in North America and Europe. Significantly Chang notes that he will be happy if the transatlantic leg just 'breaks even'. Evergreen still aims then to get the bulk of its income from the transpacific and Europe/Far East/Europe routes. On such a reckoning its round the world strategy does not look so revolutionary and brave after all.

Clearly the arrival of a line such as Evergreen, with a different set of operating costs to those of an end-to-end transatlantic carrier and a reputation for being a highly competitive and formidable opponent, to say nothing of the prospect of up to 2,240TEU of additional slots being offered in each direction every 10 days (or put another way 163,520TEU of such a capacity per year) is not something which the route's already hard pressed lines relish. Appreciating such misgivings, and aware of the depressed nature of the trade, Chang comfortingly explains that Evergreen would be willing to consider joining the relevant conferences.

Elaborating on the conference theme, Chang retorts that far from being anti conference he has always been sympathetic to the institution for which he has always felt there was need, if only in the interests of maintaining stability in the market. It seems that Evergreen's historical reluctance to join such pacts was prompted rather by the deficiencies of the various conferences themselves and the fact that they (the conferences) were reluctant to speak to Evergreen.

Thus the changes implemented recently in the rules of the Transpacific Freight Conference of Japan/Korea (TPFCJK) and the Japan/Korea-Atlantic and Gulf Freight Conference (JKAG), enabled Evergreen to announce its intention to rejoin them. On the European trade, the fact that a leading Far Eastern Freight Conference (FEFC) member initiated a dialogue between Evergreen and the FEFC in part led to the Taiwanese line achieving tolerated outsider status earlier this year.

Were Evergreen to join the transatlantic conferences/rate agreements, and assuming it remains a member of TPFCJK and JKAG and retains its tolerated outsider status with the FEFC, then the only major sector in which it would be non-conference would be westbound from the US to the Far East. In this context Chang states that Evergreen is not planning to join with the Far East Conference (FEC) or the Pacific Westbound Conference (PWC).

Although the line plans to phase out its existing Far East/US and Far East/Europe services when the round the world links swing into action, it is now seriously considering the option of starting other end-to-end liner links. Various routes currently being examined include: Far East to northern California and the Pacific North West (PNW); Far East to Mid East (*ie* Persian Gulf ports); and US East Coast to Mid East. Once again none of these options would involve the carrier in additional overheads, and in the case of northern California it would be serving territory it already covers. Similarly it operated a Far East/Persian Gulf link until late 1980. The US to Persian Gulf connection would be new.

Operating a US East Coast/Mid-East link that returned to the US via Limassol and the western Mediterranean would provide Evergreen with the interesting possibility of using its line haul ships as feeders to/from those western Mediterranean ports not incorporated in its planned round the world itinerary, but which it now serves direct within its Far East/Mediterranean link. These include Fos, Barcelona and Valencia. Possible vessels for such services would be the 'L' types, while those ro-ro/containerships now being tentatively considered would prove useful in both the US East Coast/Mid-East and Far East/Mid-East trades.

Chairman Chang is now thinking of building ro-ro/containerships

Obviously proud of the distinction Evergreen will enjoy as the only carrier to offer both eastabout and westabout round the world container services, Chang is nevertheless at pains to point out that this venture, far from increasing Evergreen's presence in certain markets, will in fact diminish it. Thus on the routes between North Europe and the Far East and the Mediterranean and the Far East, two services with an aggregate capacity of 2,700TEU every 10 days will be replaced with one of only 2,240TEU per sailing (or every 10 days), asserts Chang.

However, analysis of Evergreen's current vessel deployment on its separate Far East/Mediterranean and Far East/North Europe services shows that an aggregate of only 2,250TEU per sailing (or put another way every 10 days), is now being offered over both routes. In which case the rationalisation would appear to be virtually non existent.

Similarly, in the transpacific market Evergreen's claims of capacity reduction on present form are difficult to understand. On the round the world service alone, *ie* discounting any separate Far East/PNW California link it may choose to operate, it will be offering a one-way annual capacity of 81,760TEU. This represents an 8.5%, or 6,436TEU increment on the current one-way annual lift of 75,324TEU provided by its two transpacific services. Perhaps when the chairman talks of capacity reduction in this market he is comparing the capability of the round the world service with the total number of slots offered by Evergreen when it had a separate Far East/US Gulf-Caribbean container link in addition to operating to both the US West and East Coasts.

But whatever capacity fluctuations may or may not result from the new service, one thing seems certain: the relatively low operating and construction costs which Evergreen will enjoy with the 'G' types will enable it to be a competitive force in the market place if it so wishes. This is where its impact will be most significant, rather than in the number of TEU slots it may or may not be adding to certain routes.

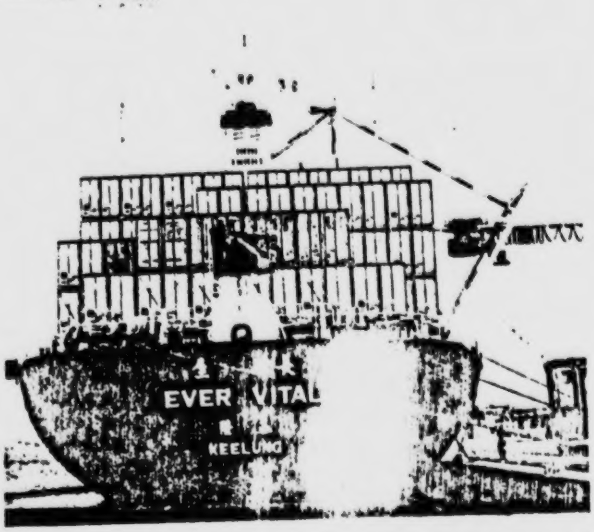
One of Evergreen's prime objectives in going round the world is in the words of chairman Chang 'to make tremendous savings on fuel, crewing and other operating costs, such as port charges'. On the first count, fuel, Chang reasons that in the Europe/Mediterranean to Far East context two sets of vessels with a combined daily fuel consumption of 100 tons will be replaced by one vessel, a 'G' type, which only burns 65 tons a day.

Similarly, with two sets of ships Evergreen now needs 115 tons of fuel a day to serve the Far East to US/Caribbean/Central America market as a whole compared with only 65 tons when it goes round the world. These calculations do not take into account the fuel consumption of feeder links, but the three new relay vessels ordered from Hakodate will burn about 20 tons of bunkers daily.

The figure of 65 tons of fuel per day for the 'G' types is based on the ships maintaining their rated speed of 21 knots, a performance needed to achieve the planned 80 day voyage time. However, should market and cost pressures force Evergreen's competitors to run their vessels at slower speeds, say 18 knots, it too might consider running the G's at a slower pace. In which case, at a speed of 18 knots only 45 50 tons of fuel would be needed per day. In this context it will be recalled that the 14 × 4,148TEU containerships ordered for United States Lines, proposed round the world service have a speed of 18.5 knots.

When it comes to crewing a similar logic applies. Two crews totalling about 34 to 40 men will be replaced by one of only 17. Neither does Chang see Evergreen's operating costs rising as a result of container logistics problems. In fact with a fleet of vessels with uniform speeds and sizes, continually circling the globe in both direc-

Appendix C-1A



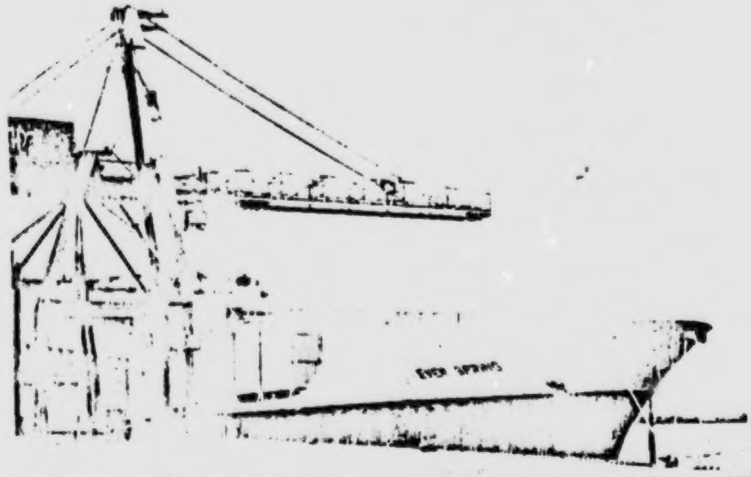
Evergreen's seven 'V' type ships will be sold when the round the world service swings into action

tions he sees them being reduced and a better balance achieved. Thus he is planning to lower the line's container requirement from its current 2.1 boxes per slot to 1.9 units. Even so the sheer growth in the size of its fleet capacity will necessitate more boxes. These the line intends to purchase rather than lease. Unlike that other round the world carrier, BBS, Evergreen does not intend to enter into a master service lease. Port charges will also decline because two sets of vessels are being replaced by one, rationalises Chang.

However, the chairman is reluctant to quantify just how much Evergreen will save in operating costs by going round the world with the 'G' types. Nevertheless, he remarks: 'We've done our analysis and on the basis of the way the world economy is progressing and the services offered by our competitors are developing, we feel this is the best way to stay competitive.'

Just what one particular competitor will be achieving when it comes to per TEU slot construction costs, is very clearly in the mind of Chang when he comes to analyse the competitive advantage Evergreen will enjoy as a result of the low construction cost of the 'G' types. The rival in question is of course Malcom McLean. And it is his reported round the world service plans and contract for 14 × 4,148TEU containerships for US Lines (see *Containerisation International* May 1982, 'McLean's latest $770 million challenge' p 45) that are clearly one benchmark against which Chang measures the cost competitiveness of his venture.

Ever Spring, built in 1975 and converted in 1977, was Evergreen's first full container vessel. It will be sold along with the other 878TEU 'S' types.



Quoting a price of $30 million per 'G' type (*ie* based on a rate of 220 yen per US$, 'It would be less if we took a longer term rate of 225 yen per US$', says Chang), the 'G's have a per TEU slot cost of $13,392, according to Chang. This is below the $13,529TEU slot cost that McLean is having to pay for his newbuildings. Warming to this theme, Chang also points out that US Lines is going to have to fill 4,148TEU per ship, whereas Evergreen is only having [illegible] per sailing

Evergreen's per TEU slot calculations are based on a maximum loading of a 'G' type, *ie* 2,240TEU. This assumes that there will be four tiers of boxes above deck. Were only three to be loaded, then the vessel's rating falls to 1,954TEU, a capacity figure which was widely quoted when the vessel orders were placed. Chang asserts that the 30,500dwt 'G's' have been designed so that there should be no dwt problems in achieving the four tier stacking, even if weight cargoes are loaded. The line's vessels have traditionally been designed with a relatively high TEU capacity in relation to dwt, a fact which in part relates to Evergreen's heavy use of 40ft containers, especially in the US.

Personally believing that the ideal future size for a containership is 2,500TEU to 3,000TEU, Chang explains that the 'G' types have been designed so as to provide for future lengthening. The addition of one bay would bring their rating up to 2,500TEU per vessel, and the insertion of two bays up to 2,750TEU.

Such flexibility might prove useful not only for Evergreen itself should it find that its capacity needs to be increased, but also as a valuable selling point should the chairman decide at some point in the future that he wishes to sell the 'G's. For, as mentioned earlier, the possible market sale price of Evergreen's fleet is obviously a prime consideration to Chang, who notes that the new 'G' types have already been valued for insurance purposes at $40 million apiece.

Expounding on Evergreen's seemingly inexhaustible ability to keep on contracting for new vessels, Chang reasons that the company can always dispose of part of its existing fleet if it needs additional cash. As a result of such a strategy, *ie* building frequently and selling off the older part of its tonnage, Evergreen has a fleet with an average age of only three years. But perhaps more to the point, it boasts a fleet with relatively low operating costs as well.

However, there is more to Evergreen's apparent ability to remain profitable, and at the same time fund impressive investment programmes, than selling off older vessels, achieving low day to day costs, or even its widely rumoured (but consistently denied by Chang) association with Marubeni, of Japan. According to Chang, one of the main reasons for its success in this context lies in its policy of seeking to amortise newbuildings over eight to eight and a half years.

'If we can't see our way to paying back the cost of a vessel over such a period, we will not go ahead and order', states Chang, who continues. 'This is unlike many carriers who base their calculations on the depreciated life of a vessel. This can be as much as 28 years, although in our case it is only 15 years.'

The judicious placing of contracts in the Far East under favourable domestic terms in the case of China Shipbuilding Corp (CSBC), or attractive export finance packages when it comes to Japan, has also helped. And Chang remarks that if he had built the 'G' types at a European yard they would have cost about $45 million each.

Once again, the logic underlying Evergreen's cost structure seems so compellingly simple that one wonders why other companies have not also tried to apply it. And until they do, Evergreen will continue to enjoy that margin for rate manoeuvring which makes it such a strong competitor□

Round the world services: it's all square

Appendix C-1B

The spectacular containership orders placed over the past few months by Evergreen Line, of Taiwan and the US operator, United States Lines, for their respective, proposed round-the-world services have inevitably focused attention on this operating strategy. With the aid of a computer model developed at the University of Liverpool's Marine Transport Centre, Dr Roy Pearson and Michael Garratt, both lecturers at the centre, attempt to provide answers to some of the questions thrown up in the wake of these two carriers' projected plans for global services. Not surprisingly, they conclude that encircling the globe is no sure-fired formula for competitive success and not something with which fools, or academics, should meddle

Two lines have recently announced plans to launch round-the-world container services; more may follow. Evergreen Line of Taiwan, is to mount a round the-world operation in early 1984. The move will give the company a network of links matched only by a few European operators. The anticipated service structure consists of two separate schedules, one eastabout the other westabout. Eight fully-cellular ships of between 1,800 and 1,900TEU, with design speeds of 21/23 knots, will be deployed in each direction. A 10 day frequency is planned.

The American carrier United States Lines is also said to be considering plans for a round-the-world service. The latter's service configuration contains noticeable and significant differences from the Evergreen plan. With the planned deployment of 14 Panamax-constrained ships of 4,148TEU, having a design speed of 18 knots, the US Lines' newbuildings are bigger, slower, fewer, and its service interval less frequent, than that of Evergreen.

The stated intentions of these carriers raise a number of important questions. Why do only two lines have such plans? Why is there not a veritable armada of operators intent on mounting such services? Does this absence of interest imply that multi-sector round-the-world services offer only marginal advantages over traditional single sector routes? Moreover, why are the two announced plans so diametrically opposed? Who's likely to have the right answer to the solution—Evergreen, with its small, faster ships, or US Lines with its big, slower ships?

The present article attempts to answer these questions and others besides. It does so with the aid of a computer model developed at the Marine Transport Centre, the University of Liverpool. The model employed in this analysis has been designed to compute the cost of any container service. It calculates separately the cost of ship operation, the number and cost of containers required, terminal operating costs, and mean transit times. The program takes an origin-destination matrix of traffic showing flows between all port pairs, projected market share and nautical distances between ports of call, and determines all possible combinations of frequency, ship capacity and speed which will satisfy the demand.

Each combination is analysed and the optimum (*ie* least cost) solution identified. For any route, output from the model stipulates the least cost service solution (including inventory costs) per loaded TEU in terms of fleet size, ship size, service frequency and speed. Reasonable estimates of traffic between any port pair have been deduced from data the Marine Transport Centre holds on its computer files of the world deployment of containerships.

Fig 1: *The port calling pattern of the modelled round-the-world service and its constituent single sector routes*

	Round-the-world service	NW Europe – US East Coast	NW Europe – US West Coast	NW Europe – Middle East	NW Europe – Far East	Med Europe – US East Coast	Med Europe – Far East	Mid-East – Far East	Mid-East – US East Coast	Far East – US West Coast	Far East – US East Coast
Rotterdam	X	X	X	X	X						
Hamburg	X	X	X	X	X						
Felixstowe	X	X	X	X	X						
Le Havre	X	X	X	X	X						
Barcelona	X					X	X				
Fos	X					X	X				
Leghorn	X					X	X				
Piraeus	X					X	X				
Jeddah	X			X				X	X		
Dubai	X			X				X	X		
Dammam	X			X				X	X		
Kuwait	X			X				X			
Singapore	X				X		X	X		*	*
Hong Kong	X				X		X	X		X	X
Kaohsiung	X				X		X	X		X	X
Busan	X				X		X	X		X	X
Kobe	X				X		X	X		X	X
Tokyo	X				X		X	X		X	X
Seattle	X		X							X	X
San Francisco	X		X							X	X
Los Angeles	X		X							X	X
Jacksonville	X	X				X			X		X
Charleston	X	X				X			X		X
Baltimore	X	X				X			X		X
New York	X	X				X			X		X

**Assumed to be fed by feeder services over Hong Kong. These services have been costed by the model*

Using these modelled costs one can assess the economics of round-the-world itineraries versus traditional single sector services. To make a valid comparison, like must be compared with like, initially at least. Fig 1 lists the 25-port, round-the-world itinerary that has been modelled in this exercise. Within it, no fewer than 10 individual single sector routes can be identified. These are also shown in Fig 1.

A preliminary assessment of the competitiveness of round-the-world services can be made by comparing the average cost per loaded TEU of such an operation against the average costs (weighted by traffic) of all the individual single sector services. Table 1 shows for each route the least cost service configuration as computed by the Liverpool model. For any line the exact configuration would necessarily depend upon market share held. The postulated share of each market held by our hypothetical line is shown in parentheses. A load factor of 80% has been assumed in all trades excepting those to the Middle East. For inbound trades to this region a load factor of 95% has been assumed and one of 10% for the outbound trades.

Optimum speed

The Liverpool model yields reasonable results in all parameters except speed. With present services operating at around 21/23 knots the results of the model imply that lines are operating sub-optimally with respect to speed. There are two explanations for this. Firstly, competitive pressures, especially where there are agreements covering rates but not service quality, lead to the adoption of service speeds in excess of the least cost optimum. Secondly, lines have probably not yet fully adjusted to high fuel costs. Certainly where newbuildings are concerned, as with the Atlantic Container Line (ACL) and US Lines orders for example, design speeds

Appendix C-1B

Table 1: *Optimum service solutions on round-the-world services and their component single sector routes*

	Market share assumptions	Fleet size	Ship size (TEU)	Frequency per month	Speed (knots)	Average cost per loaded container ($)
Round-the-World Services						
Round-the-world eastabout	10/15%*	15	2 845	4	17.6	1 170
Round-the-world westabout	10/15%*	19	2 198	5	17.1	1 190
Single Sector Routes						
NW Europe – US East Coast	10%	5	1 136	4	17.1	715
NW Europe – US West Coast	50%	4	1 495	2	19.8	1 275
NW Europe – Mid-East	20%	3	701	2	17.5	1 615
NW Europe – Far East	25%	11	2 710	4	19.1	1 250
Med Europe – US East Coast	35%	5	820	3	14.4	905
Med Europe – Far East	25%	5	1 017	2	15.2	1 395
Mid-East – Far East	20%	5	706	3	16.2	1 760
Mid-East – US East Coast	50%	4	910	2	17.4	1 900
Far East – US West Coast	10%	9	1 581	5	17.6	950
Far East – US East Coast	15%	8	1 055	3	17.5	1 542

Note: On round-the-world services a market share of 10% on the Pacific leg (ie Far East/US) has been assumed and one of 15% on all other legs

compare very favourably with those of the model.

Superficially, round-the-world operations appear cheaper. The average cost per loaded TEU for all single sector services combined (weighted by each route's traffic) is in the order of US $1,220. This is some $30 $50 more expensive than round-the-world eastabout or westabout services. As they stand at the moment, however, the above figures exclude two important cost elements, namely, handling costs, and ships' dues and canal tolls. Once these decisive items are included in the calculus, the result is all square. Table 2 shows the average cost per loaded TEU, once all possible cost elements are included, to be $1,680 irrespective of whether single sector links are employed or multi sector round the-world services.

With no great cost advantage apparent it does not look as though the sea lanes are going to fill up with ships on round-the-world itineraries. However, in adhering to a like-with-like comparison the 25 port, round-the-world itinerary postulated as a first approximation is likely to be somewhat inefficient. For instance, it may be more economic to serve the Persian Gulf, or north west Europe for that matter, via feeders rather than by direct call. Clearly, the possible permutations are endless. For the purposes of this article just one further refinement of the itinerary, considered likely to pay considerable dividends, has been modelled.

Light loads

An examination of the traffic matrix reveals the most lightly loaded leg of a round-the-world voyage as being that between Los Angeles and Jacksonville (and vice versa). By adopting an US East Coast-Europe-Mid-East-Far East-US West Coast eastabout itinerary which then back-tracks westabout, the lightly loaded US West Coast to East Coast leg could be dispensed with along with transiting of the Panama canal. Such an itinerary describes a horse-shoe shape around the globe. Compared with a complete round-the world itinerary this horse shoe shaped itinerary would save a 4,000 plus nautical miles voyage and obviate the need for expensive and unreliable Panama canal transits. The savings made possible by adoption of the horse-shoe round-the-world itinerary are shown in Table 3.

Adoption of the horse-shoe shaped round-the-world itinerary would produce average cost savings of $90 per loaded TEU compared with single-sector services, and $125 compared with complete round-the-world itineraries. These sums represent savings of between 5.5% and 7.5% respectively. It must be acknowledged though that a line intent on a full round-the-world service could always seek to mitigate the disadvantage of a lightly loaded leg through Panama by offering, as Evergreen proposes, transshipment of South and Central American traffic at that point. It can be noticed in Table 3 that average container transit times are broadly similar irrespective of type of service employed.

In modelling these round-the-world services a market share of 10% on the Pacific leg has been postulated, and one of 15% on all other legs. It could be argued that for a round-the-world operator these shares are too optimistic. Indeed, if these shares were realised there would be room for only seven to 10 such operators in the whole world and no place for any one else. So what happens to the economics of the concept if less optimistic assumptions regarding market shares are adopted? Round-the world operations have been re-modelled on the basis of only half our previously postulated market shares being attained. The results are presented in Table 4.

The horse-shoe round-the-world itinerary held a significant cost advantage over traditional single sector services on the more optimistic assumptions concerning market shares. On the reduced market shares assumptions the results of the model show, once again, an all square situation. Both the horse-shoe shaped itinerary and the single sector routes appear to be of equal cost at $1,645 per loaded TEU. Note, however, that at reduced market shares the complete round-the-world service (at $1,785) is substantially disadvantaged vis-a-vis the other two systems.

The economic case for round-the-world operations is not an overwhelming one. Superficially the case seems appealing. Using large 2,200TEU to 2,900TEU main-line vessels, round-the-world services seem competitive in terms of ship, container, and inventory costs compared with traditional single sector links. The concept becomes marginal, however, because of the greater port dues and canal tolls such services would incur, and because of the lightly loaded US West Coast/East Coast leg. In arriving at these conclusions a market share of 10% on the Pacific route, and 15% elsewhere was assumed. If a line were

Table 2: *The economics of round the-world services versus single sector services*

	Single sector routes	Round-the-world service
Average container transit time (days)*	36.1	36.8
Inventory costs** ($)	327	330
Ships & container costs ($)	895	845
Handling costs*** ($)	368	360
Ships dues & canal tolls**** ($)	90	145
Average cost per loaded TEU ($)	1 680	1 680

*Notes: * Average container transit time is taken as the average elapsed time per container between ships' departure at the origin port and arrival at destination port plus the interval between services; ** At $9.06 per TEU per day; *** At $144 per TEU move (loaded or empty); **** As reported in Fairplay World Ports Directory 1981/82*

Table 3: *The economics of the 'horse-shoe' itinerary compared with round-the-world and single sector services*

	Horse-shoe itinerary*	Single sector services**	Round-the-world services
Average container transit time (days)	36.4	34.4	36.8
Inventory costs*** ($)	330	312	330
Ships & container costs ($)	735	870	845
Handling costs*** ($)	365	370	360
Ships dues & canal tolls*** ($)	125	93	145
Average cost per loaded TEU ($)	1 555	1 645	1 680

*Notes: * Based on a fleet of 28 ships each of 2 300TEU, speed 17 knots, with a frequency of 4 per month in each direction; ** Excluding the two routes which involve transiting the Panama canal; *** See notes under table 2*

Table 4: *The effects of varying the assumptions concerning market shares*

	Postulated market shares — 10% Pacific leg — 15% All other legs		Postulated market shares — 5% Pacific leg — 7.5% All other legs	
	Round-the-World itinerary	Horse-shoe itinerary	Round-the-World Itinerary	Horse-shoe Itinerary
Inventory costs ($)	330	330	360	340
Ships & container costs ($)	845	735	920	810
Handling costs ($)	360	365	360	365
Ships dues & canal tolls ($)	145	125	145	130
Average cost per loaded TEU ($)	1 680	1 555	1 785	1 645

Table 5: *Optimum service solutions for round the world itineraries under differing market share assumptions*

Itinerary type	Market share assumptions	Fleet size	Ship size (TEU)	Frequency per month	Speed (knots)	Average cost per loaded container
Completely round the world eastabout	10/15%	15	2 845	4	17.6	$1 170
Completely round the world westabout	10/15%	19	2 198	5	17.1	$1 190
Completely round the world eastabout	5/7.5%	11	1 896	3	16.6	$1 270
Completely round the world westabout	5/7.5%	11	1 832	3	17.1	$1 291
Horse shoe round the world eastabout	10/15%	13	2 248	4	17.4	$1 020
Horse shoe round the world westabout	10/15%	14	2 408	4	16.8	$1 104
Horse shoe round the world eastabout	5/7.5%	9	1 499	3	17.5	$1 106
Horse shoe round the world westabout	5/7.5%	10	1 606	3	15.9	$1 188

contemplating a round-the world operation at only half this market share the Liverpool model suggests optimum ship size would reduce to about 1,900TEU, with a speed of 17 knots, offering a 10 day frequency using 22 ships (see Table 5).

Evergreen has opted for this ship size and frequency, but has chosen faster and hence fewer ships. The model's results suggest that US Lines, on the other hand, is wide of the mark if its intention is to deploy 14 4,184TEU ships on a round the-world service. To be competitive with its proposed service configuration US Lines would need to secure remarkably high market shares.

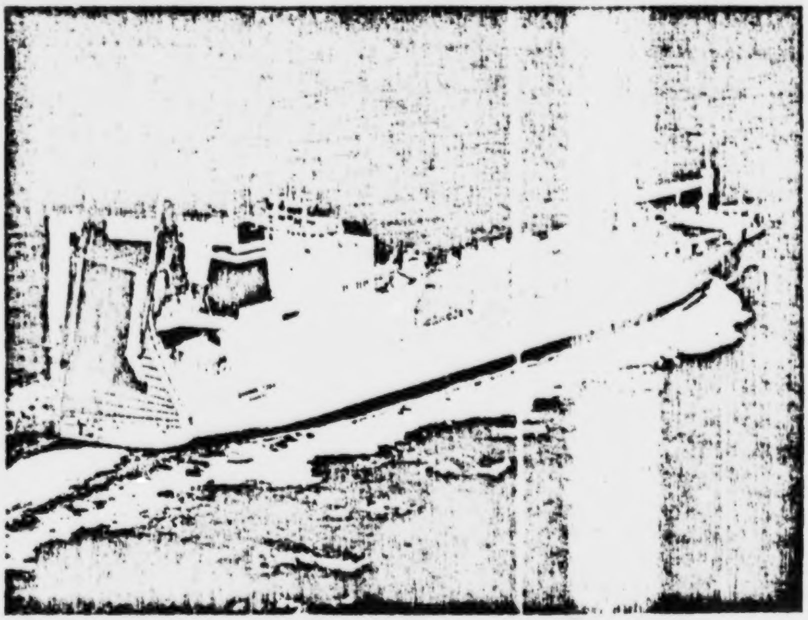
Improved case

Although the economic case for round the-world services is not overwhelming, with careful design of the itinerary their case can almost certainly be enhanced. One example of the way in which the economics of the concept can be improved was costed out above. Dispensing with transiting of the Panama canal and adopting a horse shoe shaped itinerary produces an immediate improvement. Another possible refinement of the schedule could take place in its north west European segment. Here, for example, the eastabout voyage could act as a feeder vessel for the westabout service (or vice-versa). This could be accomplished by the westabout operation dropping its boxes for north west Europe at say, Falmouth, before steaming onto the US, leaving the eastabout service to pick them up for onward distribution. In this way one of the services at least avoids a protracted and unproductive 'milk-run' around north west Europe.

Being essentially synergistic in nature, round the world services can confer valuable indirect benefits. In other words the individual sectors of a round the world itinerary, although working towards the same end, produce an effect greater than the sum effect of each sector acting on its own. Three illustrations of this synergistic relationship can be cited.

Unlike traditional single sector services in which feeder links act simply as an onward extension of one mainline sector, a feeder service linking into a round-the-world route is effectively feeding 10 or more individual routes. This must make developing regions such as the Indian sub continent, South America or the Caribbean enormously attractive feeding propositions. Such regions could secure access to extensive fully-cellular services at far less cost and greater frequencies than would be possible from direct single sector services to these regions.

Barber Blue Sea has developed its own, distinctive round-the-world strategy based on its so-called 'supercarriers'



Secondly, the use of large, cost effective ships, at frequent service intervals will prove a powerful competitive threat on numerous sectors. Operators on many small ship, low frequency, routes such as north west Europe/US West Coast, Mediterranean/US East Coast, Mediterranean/Far East and all trades serving the Mid East must be fearful of the arrival of round the world operators. Finally, because round the world services comprise many sectors, opportunities undoubtedly exist to cross subsidise between sectors. Hence, competitive storms of vacillations in trade in one sector can be weathered more comfortably by relying upon good fortune in others.

Notwithstanding these irresistable traits, round-the world services are not an area in which fools or, if a distinction can be made, academics should meddle. We hope to have demonstrated beyond reasonable doubt that encircling the globe with large ships at frequent intervals is no certain formula for competitive success. Round the world services will succeed, if they ever do succeed, largely through meticulous design of the itinerary and expert choice of ship size and speed.

In this respect the launching of successful round-the world services will represent a severe test of managerial skill. They will be a test of skill not only for shipping line managements, but also port managements, because if round the world itineraries do take hold, radical changes in the geography of container transport could take place. Port calls by the large mainline vessels would be fewer and feeder services more ubiquitous. Currently thriving port locations may find themselves heavily disfavoured. Another container revolution could well commence ☐

APPENDIX D-1

THE OVERLAND ROUTE POTENTIAL

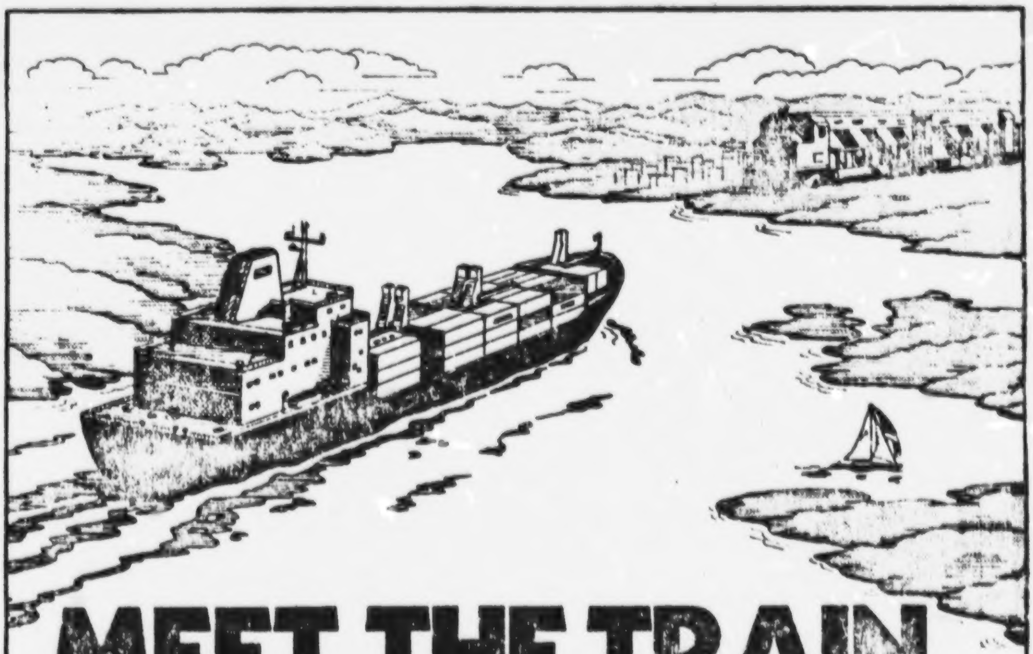
1. CN Rail - Vanterm Advertisement in the Montreal Gazette - October 18, 1982

2. CN Rail - Vanterm Advertisement in March 1982 issue of Canadian Transportation & Distribution Management

3. CN Rail - Promotional material for the Port of Montreal

The Gazette, Montreal, Monday, October 18, 1982

N



MEET THE TRAIN IN VANCOUVER

You'll find it's a whistle-stop that you can whisk your cargo right through.

Because even though Vancouver is the busiest harbour on the West Coast of North America, Vanterm can turn the discharge and loading of most vessels into an easy one-day operation.

First of all, when your ship comes in it's met by the tracks of CN Rail, one of the largest transportation networks in the world.

Then it gets the experienced handling of Empire Stevedoring Company Ltd. The efficiency of Vanterm's two high-speed 40 ton container cranes. And the convenience of Vanterm's 76 acres of containerized shipping facilities, two 925 foot container berths, a 750 Ro-Ro berth and 1460 feet of general cargo space.

So the next time your customers are waiting to meet your cargo, just give Vanterm a whistle. You'll be travelling in good company. And fast company.

Vanterm is owned and operated by the National Harbours Board and cargo handling operations are performed by Empire Stevedoring Company Ltd. under contract to the Port of Vancouver.

For more information contact:
Mr. A.G. Thomson,
Marketing Manager — Marine Terminals,
CN Rail,
1150 Station Street, Vancouver, B.C.
Canada V6A 2X7
(Telephone: (604) 665-4381,
Telex: 04-53196)

Vanterm

Connected with CN Rail offices throughout the world.

D-1:2

LANDBRIDGE IS AS SIMPLE AS THIS.

FAR EAST ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ EUROPE

At Vanterm, we've never forgotten that the shortest distance between two ports is a straight line. That's why we created Landbridge, a coast to coast transportation system that speeds containers from the Pacific Rim to Europe and beyond.

Container ships from the Pacific Rim are met at our dockside Vancouver terminal by CN Rail trains that whisk your cargo across Canada. From our eastern coast, ships speed your containers on the final stage of their journey.

Vanterm is owned and operated by the National Harbours Board. Cargo handling operations are performed by Empire Stevedoring Company Ltd., under contract to the Port of Vancouver. Marketing services are provided by CN Rail, the largest railway in Canada, with offices worldwide.

So when you're looking for a way to ship containers that's safe, reliable, efficient and fast, remember Landbridge. The simple — and straightforward — solution.

For more information contact:

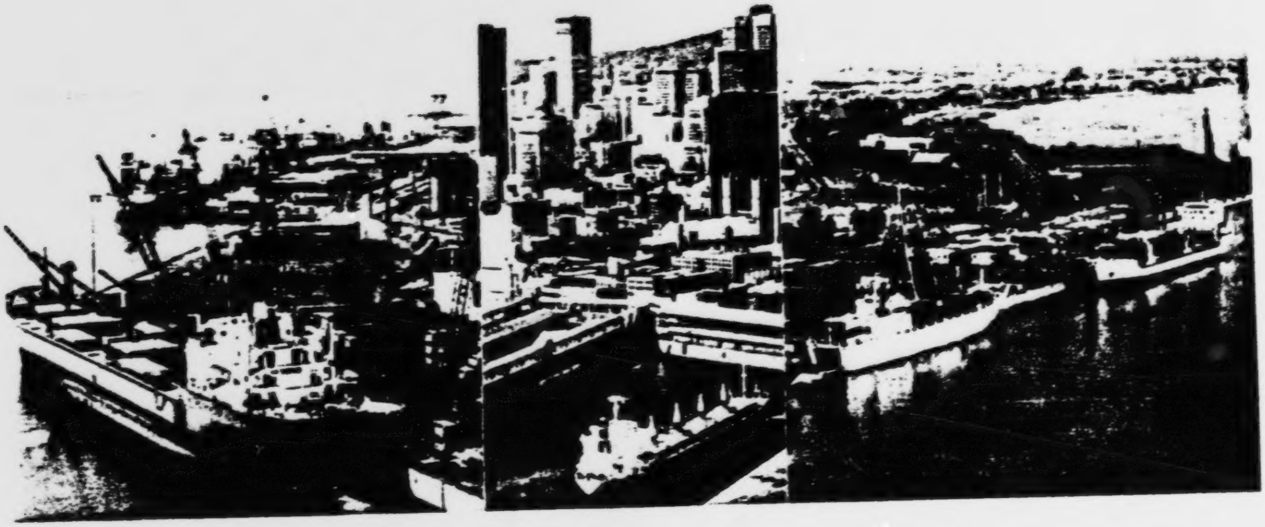
Mr. A.G. Thomson,
Marketing Manager — Marine Terminals,
CN Rail,
1150 Station Street, Vancouver, B.C.
Canada V6A 2X7
Tel: (604) 665-4381
Telex: 04-53196

Vanterm

Connected with CN Rail offices throughout the world.

Publication MM 4

Import/Export Service



The Port of Montreal stretches over a distance of 20 kilometres and with railway trackage serving all sheds and installations along its entirety, CN Rail provides a direct rail connection to any rail point on the North American continent.

Experienced CN Rail personnel at the Port of Montreal equipped with the latest material handling equipment, provide efficient, reliable, economic handling of all products of all sizes, shapes and weights, to meet the needs of the Import/Export market.

HASSELT
ANTWERPEN

CN Rail, Data sheet MM 4

CN Rail Montreal Wharf Operations

Wharf Office:	300 St-Sacrement Street, Room 8, Montreal, Quebec H2Y 1X4 Our Montreal Wharf Office is the liaison between CN Rail, Shipping Companies, and customers located on the Harbour served by private rail sidings. This office arranges ordering and placement of empty or loaded rail cars and trailers. Office hours are from 8:00 AM to 5:00 PM Monday through Friday.
Wharf Facilities:	A five-track, 50 car capacity area adjacent to the West entrance to Montreal Wharf for cars awaiting specific shed or area placement instructions from customers. A 134 square meter area adjacent to grain elevator No. 1 where all automotive maintenance on intermodal lifting equipment is performed. A 193 square meter area also located in grain elevator No. 1, where all blocking, bracing and tying materials are prepared.
Materials Handling Equipment:	11 Gasoline-powered Fork Lifts 1 Five-ton capacity mobile crane 3 Paper Roll Clamps 1 Fork Lift transporter 2 Trucks for moving blocking and bracing materials
Personnel:	Supervisory staff of 6 and 80 fully-trained wharf operation employees.

Services:

The Montreal Wharf generally is in operation from 08:00 - 17:00 hours for conventional traffic. Containerized traffic is handled 24 hours a day, 7 days a week by most shipping lines.

The Wharf Operations cover a 20 kilometre distance along the Montreal Harbour commencing at Bickerdike Pier in the West and extending Eastward to the Louis Hippolyte Tunnel.

CN Rail employees do not handle traffic to and from ships. However, our employees do handle traffic to and from sheds and rail cars. All trackage on the Montreal Wharf is owned and operated by the National Harbours Board.

Communications:

CARLOC (Car Location System)
Tone pagers — to maintain communication with CN Supervisors on the harbour site

Telephones:

Wharf Traffic Manager	877-4835
General Supervisor	877-4859
Office Assistant	877-4912
Garage Supervisor	877-5763
Carload Clerk	877-5239
Import Clerk	877-5030
Export Clerk	877-5053
Tracing	877-2521

Telex: 05-25215

Comtel: MTLWO

CN Rail is the answer to your import/export distribution problems.

As Canada's largest railway, CN Rail places at your disposition the largest and most diversified car fleet in the country. But, big as we are, we still tailor our service to your needs. For instance, in addition to providing fast, efficient transfer of rail cars directly to Montreal Wharf, we provide the following services:

Experienced CN Rail personnel load or unload cars of import/export traffic directly from or to Montreal Wharf sheds and facilities.

Specially trained CN Rail teams block, brace and palletize shipments of all shapes, sizes and weights.

In addition to a fleet of fork lift trucks, our equipment includes specially-equipped lift trucks with clamps for the safe, efficient handling of newsprint, a 5-ton capacity mobile crane, and access to other equipment to handle any and all traffic.

The sheer size or extreme weight of such traffic requires special handling and, very often, the use of special rail cars. To ensure safe handling, a route clearance and car type must be secured from the CN Rail Dimensional Load Supervisor or through Overseas Markets Sales and Service personnel prior to vessel's arrival.

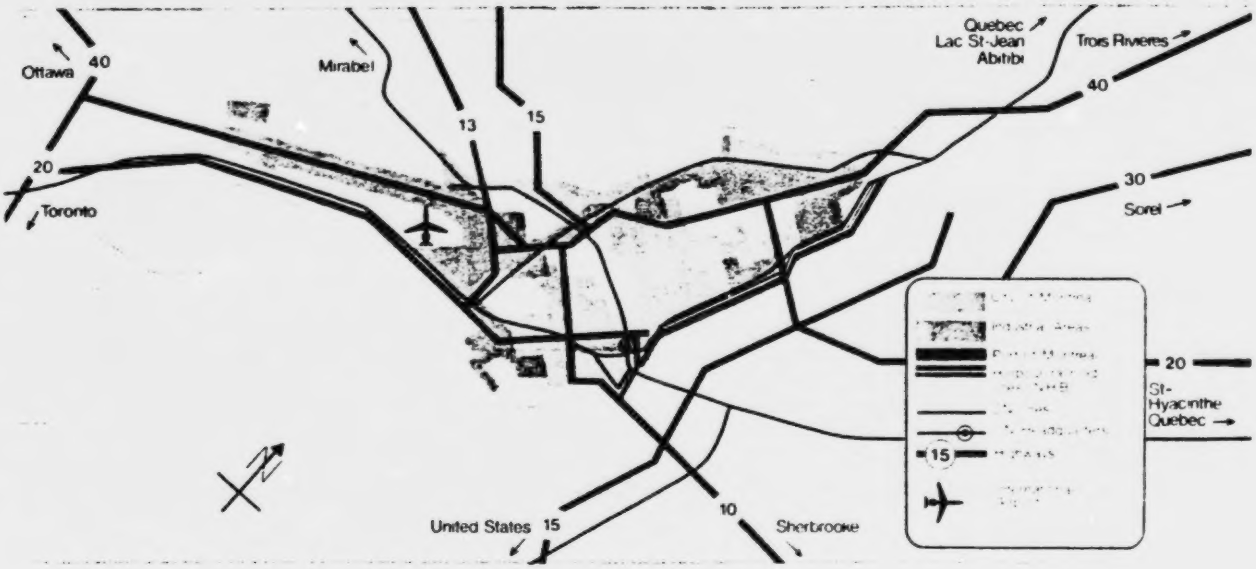
The Port of Montreal has extensive grain handling facilities and CN Rail participates in the huge annual movement of grains of all kinds.

CN Rail piggyback service is available to and from Montreal Wharf.

CN Rail personnel provide a visual container inspection service and record all container and rail car numbers. This information is computerized for billing and also provides for fast, efficient car/container tracing.

An efficient, safe-handling container stuffing/destuffing service is available at our nearby Monterm I and Monterm II Distribution Centres. Bonded storage is also available and Customs Officers are located right on the premises.

CN Rail – The fast freight service linking the Port of Montreal with all Canadian and United States points.


Ottawa
40
Mirabel
13
15
Quebec
Lac St-Jean
Abitibi
Trois Rivieres
40
20
Toronto
30
Sorel
Industrial Areas
15
20
St-Hyacinthe
Quebec
United States
15
10
Sherbrooke

For more information on how CN Rail's Port of Montreal Import/Export service can help you, please contact your local CN Rail Sales Representative:
OR

The Manager,
Sales & Services, Overseas Markets
St. Lawrence Region
Room 840
800 Dorchester Blvd West
Montreal, Quebec
H3B 1X9
Tel: (514) 877-4476
Telex: 055-61906

Publication MM 1

Freight Distribution Centre

A modern distribution centre serving Metropolitan Montreal, key transfer terminals such as Mirabel and Dorval Airports, Port of Montreal and the South Shore Area.

At Monterm, our customers will find the following services for both Domestic and Import/Export traffic:

- Freight Consolidation
- Container Services: Stuffing & Destuffing
- Transshipping

CN
CN

Monterm / Montreal

Location: 5760 Côte de Liesse, Town of Mt. Royal, Que. H4T 1B1

Building: Brick construction; concrete floor; fully heated and equipped with sprinkler and automatic alarm systems

Working Space: 101,000 square feet

Facilities:

CN Rail private siding with 8-railcar siding (featuring 5 car spaces inside the warehouse and an additional 3 car spots providing warehouse access from rail siding)

Fourteen doors for trailer/container traffic

Storage racks for freight consolidation

Special lock-up for high value goods

Materials Handling Equipment:

18 Propane-powered fork lifts
1 Five-ton capacity, swing boom mobile crane (particularly useful for loading/unloading gondola car traffic)
7 Paper Roll Clamps (70" max. capacity)
4 Tractors
3 Forty-foot trailer vans
1 Flat Bed truck

Personnel: Supervisory staff of 5 and 70 fully trained warehouse and office personnel

Service: Monday through Friday — 24 hours a day. Open to customers from 07:00 to 20:00 hours

Tariff: C.F.A. (E) 7589. Special rates can be negotiated by applying to the General Supervisor, Monterm at (514) 731-5215

Communications:

Warehouse intercom system
Tone pagers
CARLOC (Car Location System)
Telex
Comtel

Telephones:

General Supervisor	(514) 731-5215
Import inquiries	731-3217
Export inquiries	731-2502
Customs officers	731-1562
Container inquiries	731-3219
Accounting	731-8229

Telex: 05-24884

Comtel: MTLCL

CN Rail's Monterm is the answer to your distribution problems.

Our staff is well trained and our materials handling equipment assures you of the best in:

Monterm's consolidation service allows one customer to combine several shipments in one car to take advantage of carload rates with a resultant cost saving.

Importers and Exporters will find at Monterm a reliable service for the stuffing and destuffing of their container traffic.
Bonded storage space is available and customs officers are located right on the premises.

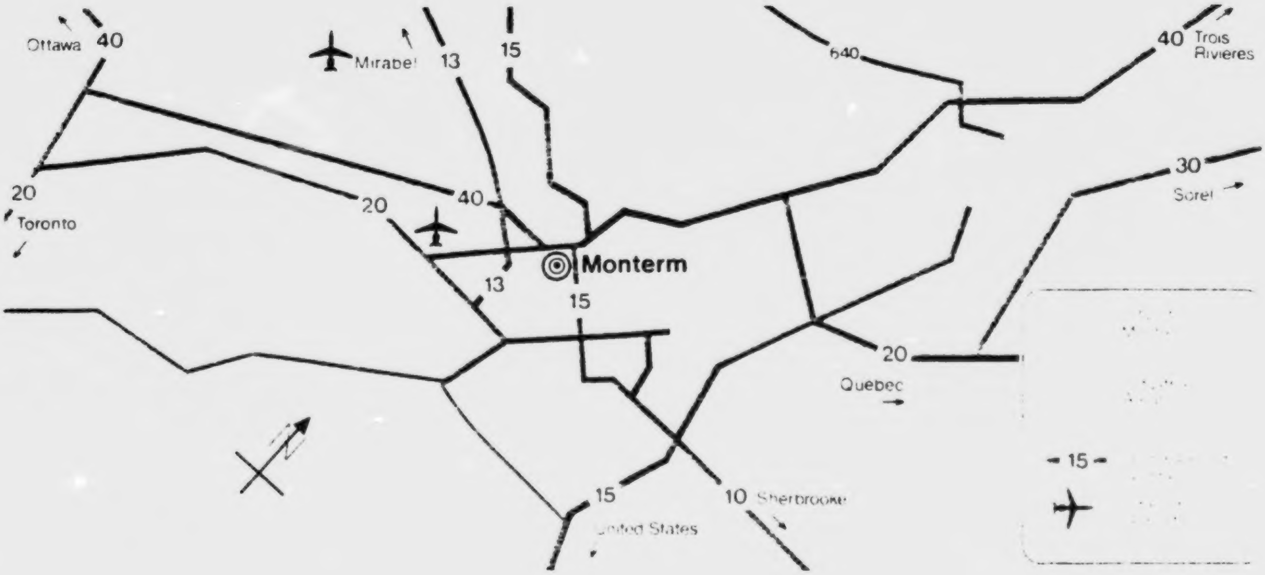
This modern, heated building is served by an 8-car private siding – five cars can be spotted inside. CN Rail's Taschereau Yard is located nearby and provides prompt, efficient switching service.

Our 8-railcar siding and 14 truck bays coupled with our modern materials handling equipment affords fast, safe transfer of goods. Blocking, bracing and palletizing services are also available.

Customers can realize savings in overall transportation charges and enjoy lower inventory and warehouse costs by receiving full carloads at Monterm and distributing goods directly to Montreal area consignees.

Cartage service is available in CN Rail owned trailers by special arrangement or if customer prefers via his own trucks or licensed carrier.

Monterm Distribution Centre is conveniently located in Town of Mt. Royal, at 5760 Côte de Liesse Road, providing quick, easy access to all major autoroutes and highways.


Ottawa
40
Mirabel
13
15
640
40
Trois Rivieres
30
Sorel
20
Toronto
20
40
Monterm
13
15
20
Quebec
15
15
United States
10
Sherbrooke
15

For more information concerning our Monterm Services please contact your local CN Rail Sales and Services Representative
OR

The General Supervisor

CN Rail Monterm Distribution Centre
5760 Côte de Liesse
Town of Mt. Royal, Que.
H4T 1B1
Tel: (514) 731-5215
Telex: 05-24884

APPENDIX E-1

GOVERNMENT OF CANADA COST RECOVERY POLICY

A 1981 Federal Government Discussion Paper on "Canadian Freight Transportation System Performance and Issues" outlines the current Ottawa attitude as regards cost recovery policy and programmes. At present the government policy and programmes as outlined in this Paper are being applied to the land mode (compensatory rail rates) but not to the marine mode (free icebreaking and dredging on the St. Lawrence). This creates an economic distortion in the national transportation network for eastern Canada which is detrimental to the Atlantic Region and the competitive situation of Halifax relative to Montreal as a gateway port.

The appropriate section of the above-mentioned government Paper is quoted below.

EXTRACT FROM "CANADIAN FREIGHT TRANSPORTATION SYSTEM PERFORMANCE AND ISSUES"

Page 59 et seq. (Quoted here to end of Page E-1:5)

5.3.1 The Situation

"Cost recovery policy in transportation concerns the recovery of expenditures for services and facilities provided by government. Essentially, it is based on natioanl economic principles as well as on government budgetary requirements. Although there has been considerable success in pursuing the policy, areas remain where the level of cost recovery is low and where there are problems in increasing its level.

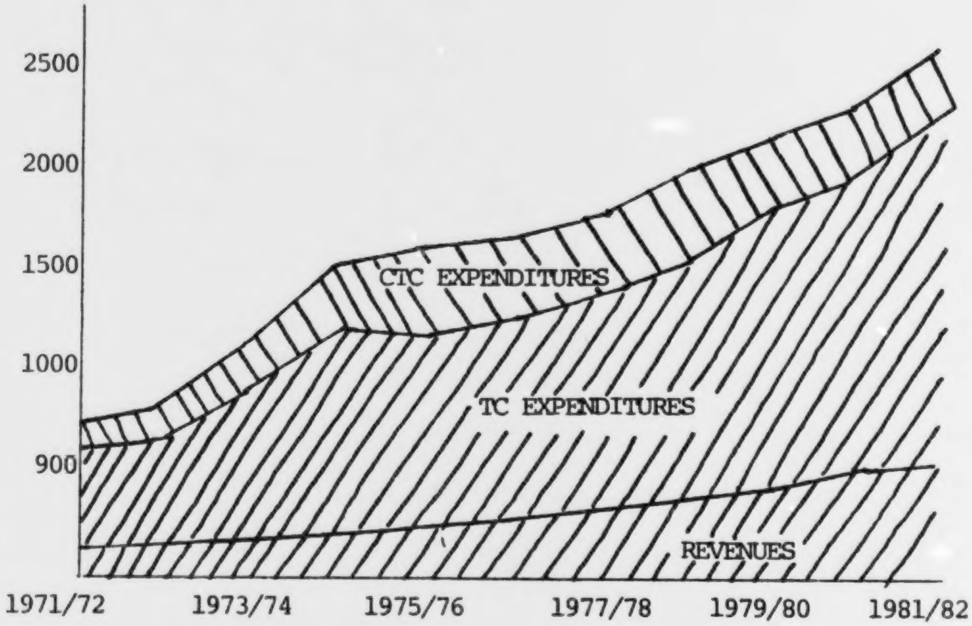
Cost recovery, as a contributor to the efficiency of the transportation system, was recognized in the National Transportation Act (NTA) of 1967. It was further defined in the government's 1977 medium-term economic strategy. Moreover, the government's commitment to expenditure restraint in a period of rapidly increasing costs, together with demands for more transportation system capacity, have created a climate for increasing the level of cost recovery for facilities and services provided by government.

An appropriate pricing structure for facilities and services based on actual costs not only encourages sound future investment, but also leads to allocative efficiency by encouraging users to demand the level of service for which they are willing to pay. The pricing policies used in cost recovery strategies can also encourage privatization initiatives and promote other measures involving a reduced department role.

The combined Transport Canada/Canadian Transport Commission gross expenditures rose from $880 million in 1972/73 to $2,488 million in 1980/81, growing at 14% annually (Figure 3). During the same period revenues rose from $189 million to $635 million, an annual increase of 16%. Consequently, the over-all revenue/expenditure ratio will be approximately 23% in 1981/82.

Figure 3

Actual & Forecast
TC/CTC Expenditures and Revenues
($ Millions)



Source: Strategic Policy Branch, Strategic Planning Group, Transport Canada.

Cost recovery initiatives have been, or are being, implemented in St. Lawrence Seaway tolls, wharf and pilotage tariffs, icebreaking and navigation aids as well as in air licensing, certification, terminal and navigation services.

The effect of cost recovery on pricing decisions will influence many specific departmental projects in the next decade. These include the appropriate degree of cost recovery for the proposed nuclear icebreaker, requiring careful scrutiny and consultation with the expected users and beneficiaries before construction begins. The implementation of demand management techniques (e.g., peak load pricing) may effect carrier flexibility.

5.3.2 Future Directions and Responses

The federal government must decide whether and how to increase the level of cost recovery over the next few years, given the limited prospects for new funds and the continuing requirement to finance essential, but less than commercially viable, services across the country. Cost recovery policies must take account of regional development benefits, the effect on the user, energy, environmental and broader social considerations. Important components of cost recovery policy include consultation with users concerning the facilities and services they need and are willing to pay for, and the reconciliation of those levels with adequate standards of safety. Although the policy of increased cost recovery may have been more palatable in the last decade, it may now be increasingly difficult to intensify its implementation owing to the inflationary rate increases shippers must face. Nevertheless, the rationale for cost recovery remains.

Cost recovery policies being considered include:

(a) establishing user charges where none exist at present (e.g., Coast Guard icebreaking and navigation services), and

(b) increasing the levels of recovery in existing applications (e.g., Seaway tolls), recognizing that not all costs are incurred for the benefit of transportation system users.

A related policy is to transfer the operation of certain services and facilities from the Federal government to the private sector. The pricing policies implicit in cost recovery would make the services and facilities more commercially viable and hence more attractive as private sector investments. Transferring to the private sector could, however, create problems related to federal responsibility for licensing, inspection and safety." End of Quote.

The legislative and policy aspects of the governments cost recovery programmes were discussed fully in a Paper presented to the 1979 CTRF Conference entitled "Transportation User Charges: A Federal Perspective" by Mr. Z. Haritos of Transport Canada, Ottawa.

The following extract from this paper is reproduced to provide additional background information to this complex issue: (Quote continues to end of Page E-1:10)

EXTRACT FROM "TRANSPORTATION USER CHARGE: A FEDERAL PERSPECTIVE"

3. Legislative Framework and Government Policies. The concept of user charges and the related ones of cost recovery and commercial viability are based on Section 3 of the National Transportation Act which states:

> Each mode of transport, so far as practicable, bears a fair proportion of the real costs of the resources, facilities and services provided that mode of transport at public expense.

Further, the major elements of a revised transportation policy were announced in the House of Commons in June 1975 [1], following an extensive review of Canadian transportation carried out in 1974 and 1975. Proposed revisions to the

---

[1] "Transportation Policy - A Framework for Transportation in Canada";
"An Interim Report on Inter-City Passenger Movement in Canada"; and,
"An Interim Report on Freight Transportation in Canada".

National Transportation Act of 1967 reflecting this revised policy [1] included a statement of principles intended to assist in achieving the objectives. One of these principles states:

> " ... commercial viability should be an objective both in the operation of transportation services and in the provision of facilities and services in direct support thereof ... ".

There have been additional pressures on the Department of Transport to increase its user derived revenues. In late 1977, the Federal Government announced a general series of structural policies designed to restore a reasonable medium and longer term growth for the Canadian economy. These policies, known collectively as the "medium-term economic strategy", emphasized measures that would help establish a more competitive and productive Canadian economy. Transport Canada was one of the departments instructed by Cabinet to proceed with specific initiatives and program developments to achieve the medium-term economic strategy. Specifically, the discussion paper [1] stated:

---

[1] Tabled initially in the House of Commons, January 1977, (Bill C-33).
An amended version was re-introduced in November, 1978, (Bill C-20).

> Given the objectives of the medium-term economic strategy, however, consideration might be given (by Transport Canada) ... to increasing the emphasis on economic and efficiency-oriented objectives rather than socially-oriented goals which often call for deviations from the principles of commercial viability and reliance on market mechanisms. Adopting, in this way, a sharper focus on economic objectives might well carry practical implications for existing priorities and programs.

The discussion paper also identified issues to assist the implementation of the medium-term economic strategy. Among issues identified for Transport Canada is the need to establish pricing based on market criteria.

This has been further supported by the recently developed departmental strategic objective [2]:

> To recover the costs of departmental facilities and services that are provided and operated in support of transportation requirements.

---

[1] See Note 5.

[2] Transport Canada - Its Roles and Objectives, Transport Canada, 1979

The final direction and thrust given to the user charges and cost recovery policies will always, of course, be subject to the diversity of government's objectives, efficiency being one of them. The primary reason for the provision of services by government is its perception of the inability of the market to respond effectively to the needs of the governed. Government perceives that there are significant external effects associated with these services and also that the market place cannot fulfill the multi-dimensional set of government objectives which could and should be accommodated. The balance between efficiency and commercial viability and those other objectives and the degree to which the former will take precedence over the latter is for government to judge and direct.

In line with the current transportation policy embodied in the former Bill C-20 (introduced in November 1978)

> where a decision of the Government of Canada or of the Government of Canada and one or more provincial governments requires that the achievement of national or regional social and economic development objectives take precedence over the objective of commercial viability referred to in paragraph (g), the benefits and costs involved should be identified and any relevant additional costs assumed by the government or governments concerned.

Hence, when government deviates from the normal transportation planning process to provide adequate transportation on the basis of current and anticipated demands, in order, for example, to assure a higher degree of regional development, the additional costs of such a deviation should be absorbed by government. Projects that become candidates for partial government support are those that would promote objectives such as (a) regional development; examples could be cited such as MFRA/ARFAA subsidies; (b) experimentation with new concepts such as STOL, GO Rail Passenger, VIA Rail; (c) R & D, such as development and applications of alternative fuels for transportation, etc. The degree of government support would depend on the degree of deviation from standard planning and market strategies, to be determined on project by project basis.

END OF EXTRACT

APPENDIX E-2

ICEBREAKING COSTS

The extent and magnitude of these costs have been a very contentious issue for about 15 to 20 years. Many M.Ps. have raised questions in Parliament and written information has been sought from Transport Canada on numerous occasions by several other bodies and organizations. In general, most information has been given in such a manner that it is difficult to identify component costs or to enable a reasonable breakdown or annual comparison of these costs. For instance, the cost of icebreaking services for the period 1969 to 1975 as stated in Ministerial replies is given in the following table:

TABLE I

ICEBREAKING COSTS WITHOUT DEPRECIATION AND INTEREST

Year	St. Lawrence		Totals for Gulf and River	Newfound-land	Arctic	Annual Total for all Areas
	River Ports	Gulf				
69/70	1,021,550	3,232,000	4,253,550 (4.3)	671,500	2,570,300	7,495,350
70/71	1,169,750	3,402,000	4,571,750 (4.6)	706,800	2,705,500	7,894,050
71/72	1,314,900	3,698,000	5,012,900 (5.0)	768,300	2,940,800	8,722,000
72/73	1,415,050	4,108,000	5,523,050 (5.5)	1,153,600	3,267,600	9,944,250
73/74	1,734,950	4,669,300	6,404,250 (6.4)	970,000	3,713,200	11,087,450
74/75	1,948,750	5,367,000	7,315,750 (7.3)	1,115,000	4,268,100	12,698,850

Source: Commons Debates July 24, 1975, Question No. 2847
Commons Debates December 11, 1975, Question No. 3583

The above figures do NOT include the capital costs of icebreakers. Four new icebreakers were commissioned between 1965 and 1975 at a capital cost of $48,844,000. It is also apparent from comparing the above 1974/75 figures for the St. Lawrence River and Gulf with those given in the Table to CGFM, 3-6943 (included at Table II) that Depreciation and Interest are NOT included, but that icebreaking costs for flood control are included. For instance, the 1974/75 combined total for St. Lawrence River and Gulf, including icebreaking and escorting and flood control given in Table II, is $7.3 Million for operations and maintenance only. This tallies with the total of the St. Lawrence ports and gulf figures for 1974/75 given in Table I above. However, if Depreciation and Interest are added, the total jumps from $7.3 Million to $9.3 Million.

TABLE II

SUMMARY OF ICEBREAKING AND FLOOD CONTROL COSTS FOR THE ST. LAWRENCE RIVER AND GULF

1974-75 TO 1980-81 (MILLIONS OF DOLLARS)

TYPE OF COST	1980-81	1979-80	1978-79	1977-78	1976-77	1975-76	1974-75
OPERATIONS & MAINTENANCE							
Icebreaking & Escorting	7.0	7.4	5.9	5.8	5.3	4.8	4.3
Flood Control	5.5	4.5	4.2	3.8	3.8	3.4	3.0
SUB-TOTAL	12.5	11.9	10.1	9.6	9.1	8.2	7.3
DEPRECIATION							
Icebreaking & Escorting	0.9	0.9	0.9	0.5	0.5	0.5	0.5
Flood Control	0.6	0.6	0.6	0.3	0.3	0.3	0.3
SUB-TOTAL	1.5	1.5	1.5	0.8	0.8	0.8	0.8
INTEREST							
Icebreaking & Escorting	2.6	2.0	1.2	0.6	0.7	0.7	0.7
Flood Control	1.6	1.3	0.8	0.4	0.5	0.4	0.5
SUB-TOTAL	4.2	3.3	2.0	1.0	1.2	1.1	1.2
TOTAL							
Icebreaking & Escorting	10.5	10.3	8.0	6.9	6.5	6.0	5.5
Flood Control	7.7	6.4	5.6	4.5	4.6	4.1	3.8
GRAND TOTAL	18.2	16.7	13.6	11.4	11.1	10.1	9.3

The information given in this table is based on the qualifying assumptions given on the next page.

ASSUMPTIONS FOR TABLE II

(1) The term Gulf and St. Lawrence River is taken to mean the main shipping channel from the Gulf to the Port of Montreal and is understood to be a single geographic unit - not two areas such as (1) Gulf and (2) St. Lawrence.

(2) Cost of escorts carried out in the Gulf for traffic destined to Gulf ports including ferry services is excluded.

(3) A representative percentage of ships time on icebreaking has been applied to all the years under question for the purpose of allocating costs of ships operations to icebreaking and flood control.

(4) Operations and Maintenance (O & M) costs include allocations of administration costs up to and including the level of the Commissioner's office, as well as the employer portion of employee benefits costs.

(5) Depreciation on ships is based on historic costs amortized on the straight line method over the anticipated life of the ship, usually 20 years.

(6) Interest on investment in ships is based on average book value for the year and the average rate of interest for the year as advised by Department of Finance.

The following are the average percentages which derive from interpolation of information in Tables I and II:

Icebreaking and escorting for shipping . . .	59%	(see Note)
Flood Control and other purposes	41%	
Total icebreaking service cost	100%	
River costs	27%	(26.5%)
Gulf costs	73%	(73.5%)
Total costs for River and Gulf	100%	

NOTE: This percentage of 59%, as applied to the costs for icebreaking for shipping/escorting in the Gulf, is confirmed in the answer to Question 1145, dated November 19, 1976. In this, the Minister quotes the total icebreaking cost in the Gulf for 1975/76 as $6,914,872 and that that attributable to "support of river shipping" is $4,036,632 which is 58.376% of the total.

Applying these percentages to the information in Tables I and II, the "ball park" figures for icebreaking costs which should have been recovered from shipping using the river ports each year since the 1969/70 season are given in the following Table.

TABLE III

ICEBREAKING AND ESCORTING (NO FLOOD CONTROL) COSTS (MILLIONS OF DOLLARS)

YEAR	Operations & Maintenance Only			Total Including Depreciation & Interest		
	River	Gulf	Total	River	Gulf	Total
1980/81	1.9	5.1	7.0	2.8	7.7	10.5
79/80	2.0	5.4	7.4	2.8	7.5	10.3
78/79	1.6	4.3	5.9	2.2	5.8	8.0
77/78	1.6	4.2	5.8	1.9	5.0	6.9
76/77	1.4	3.9	5.3	1.8	4.7	6.5
75/76	1.3	3.5	4.8	1.6	4.4	6.0
74/75	1.2	3.1	4.3	1.5	4.0	5.5
73/74	1.0	2.7	3.8	N/A	N/A	N/A
72/73	0.9	2.4	3.3	N/A	N/A	N/A
71/72	0.8	2.2	3.0	N/A	N/A	N/A
70/71	0.7	2.0	2.7	N/A	N/A	N/A
69/70	0.7	1.8	2.5	N/A	N/A	N/A

Ministerial replies to two questions, No. 2351, dated April 20, 1977, and No. 1145, dated November 19, 1976, relating costs for 1974/75 and 1975/76 are not entirely compatible with the Ministerial replies and information contained in Tables I and II above. It is also illustrative of the confusion which can arise through loose terminology and lack of definition of such terms as "cost of icebreaking services" and "icebreaking costs".

For instance, in Question 1145, the "cost of icebreaking services" in 1975/76 for the St. Lawrence river is $5,751,570 and the gulf is $6,914,872, a total of $12,666,442; whereas, in the same reply, under "icebreaking costs", the river is still given as $5,751,570, but the gulf is now quoted as "In Gulf to support river shipping" and is reduced by $2,878,240 to $4,036,632, i.e., a total of $9,788,202 to aid winter navigation for the river ports in the Gulf and the River.

Table II gives the 1975/75 total for icebreaking and escorting in the river and gulf as $4.8 million without Depreciation and Interest and $6.0 million with.

Again, in the same answer, the 1974/75 icebreaking costs for the river only are given as $5,446,648. In Table I they are only $1,948,750 and Table II the total for icebreaking and escorting in river and gulf with depreciation and interest included is only $5.5 million.

As regards capital costs and depreciation for icebreakers, in answer to Question 2847, Commons Debates, dated 24 July 1975, the Minister of Transport stated "This estimate (of icebreaking costs in the river) does not include the capital cost of icebreakers used in performing the icebreaking function because in government accounting, capital costs are written off in the year in which funds are appropriated . . . . . . These vessels are used in the St. Lawrence River, the Great Lakes, the Gulf of St. Lawrence, around Newfoundland and in the Arctic and it would be difficult to pro rate capital costs on such a diverse spread".

However, in answer to Question 2351, dated April 20, 1977, the Minister gives actual totals for depreciation over a period of 20 years on all icebreakers for each year from 1970/71 to 1976/77. Then, using 1975/76 figures as an example he takes the total cost of St. Lawrence River and Gulf icebreaking and divides it into the total cost for all icebreaking services in all areas for that season and obtains a figure of 46.8% as being the amount of the total depreciation on all icebreakers in that year which should be charged against the River/Gulf operations. This works out to about 2.8 million, whereas, in Table II, depreciation of only 0.5 million for icebreaking/escorting and 0.3 for flood control, or a total of 0.8 million is given.

Furthermore, in Question 2351, there is an anomoly in the total icebreaking cost for the River and Gulf. The figure used is $9,788,202 which has previously been calculated and provided in Question 1145, dated November 19, 1976. This figure was arrived at by adding the total river costs to the portion of the total gulf costs allocated as in support of river shipping. If this is in fact true then it would appear that all icebreaking costs on the river can be attributed to shipping and none to flood control, however, reference to Table II will show that this is not the case.

Ice Control Structures

In addition to icebreaking vessels, the Federal government also provides fixed works for ice control purposes; i.e., ice dams, ice booms and artificial islands. From the Ministerial answer to Question 2236, dated March 12, 1981, and the information provided in the answer to Question 8 from the Province, RHS-CGAW, dated 8/6/81, the capital costs for these structures between 1967 and 1971 amounted to $1,102,500, with annual maintenance costs as follows:

Year	Total Maintenance	Allocation to Shipping
1976	$221,900	($130,921)
1977	255,000	(150,450)
1978	375,500	(221,545)
1979	138,700	(81,833)
1980	165,100	(97,409)
Total for 5 years	$1,156,200	($682,158)

It is stated that these structures aid navigation by providing a measure of ice control and that they also play a role in flood prevention. Thus, a proportion of the capital costs should conceivably be allocated to the capital costs of port improvements at the river ports and a proportion of maintenance costs (59%) allocated to the cost of icebreaking services for navigation/escorting of ships. These amounts are shown in parenthesis above.

Cost Recovery of Icebreaking/Control Activities

The foregoing paragraphs show that, if the Federal Government is serious about recovering the costs of icebreaking/control services, it is not seemingly as fraught with problems as they lead one to believe. It has been the stated intention of government to institute "ice dues" to recover the costs for some 7 or 8 years now. At present, however, they seem no nearer to implementing this aspect of their announced "cost recovery" programme than they were at the outset.

From their own statements and figures, it is apparent that in 1980/81, the river ports benefitted directly by 10.5 million dollars for icebreaking services alone. Maintenance of ice control works would probably add another 0.1 million to this total.

Up to the present, efforts to identify the impact of the charges needed to recover these costs have been directed towards the tonnages of cargoes. Port and Harbour dues and all other charges, except pilotage, are assessed against the gross registered tonnage of vessels. Pilotage is assessed by special "Pilotage Units" which are dependent on ship dimensions rather than tonnage. Thus, it would seem logical that "ice dues" should be assessed in a similar manner as other port charges; i.e., on a vessel's gross registered tonnage; although it is conceivable that "Pilotage Units" or some other unit might be used in lieu.

It is admitted that there are other complicating issues, such as the distance up river, i.e., should ships using Quebec City pay the same as those using Montreal, also the "ice classification" of a vessel is another issue. It does not seem beyond the realm of possibility to assess charges at say so much per vessel gross registered ton/mile from a given point where the coast guard considers the "river" to end and the "gulf" to begin. For instance, a ship of say 10,000 GRT going to Quebec and traversing 'x' miles would get charged 10,000 times 'x' units, but the same vessel going to Montreal and traversing 'y' miles gets charged 10,000 times 'y' units.

Alternately, instead of a "distance multiplier" there could be "districts". For instance, in the St. Lawrence River there could perhaps be three districts, with District I being from seaward to the western limit of Quebec Harbour, District II from the western limit of Quebec Harbour, to the western limit of Trois Rivieres Harbour, and District III from the western limit of Trois Rivieres Harbour to the western limit of Montreal Harbour. It would then be a simple matter to assess ice dues on shipping using port or terminal facilities located within any of the three Districts, i.e., shipping to Montreal would pay dues for Districts I, II and III, while that going to Quebec would only pay dues for District I.

Insofar as the "Ice Classification" of a vessel is concerned, this could be taken into account by charging a lower rate depending on the vessel's ice classification, as is done by the Finnish Authorities. Alternatively, it could be achieved by means of a discount or rebate on the ice dues charged similar to that applied by marine insurers on marine insurance premiums for vessels navigating within various areas subjected to ice conditions during certain periods of the year. For instance, in the St. Lawrence gulf and river areas, during the stated ice risk periods, marine insurance premiums are increased by a certain amount per GRT plus a percentage on insured value. Lloyds Register Ice Class 1 vessels get a 70% reduction on these increases, Ice Class 2 get 30% and Ice Class 3 get 15%. These already established internationally accepted standards could be readily used in the application of ice dues on shipping using the river ports during specified seasonal limits. A copy of the Insurance Institute Warranties applicable to this situation is attached at the end of this Appendix.

By its own statements and figures, the government has indicated that about 59% of icebreaking costs in the river are for shipping purposes and only 41% for flood control. Also, that about the same percentage (59%) is applicable to the total icebreaking costs in the gulf to support river shipping. Because the flood problem in the gulf is seemingly not as great as in the river, it is assumed that the other 41%, in this case, is the cost of, not only what little flood prevention might be needed, but mostly for shipping using the gulf ports. In this connection, it should be noted that in Table I, the icebreaking costs for Newfoundland are separated out from those for the Gulf.

Thus, in summary, it would appear reasonable that, without too much controversy, the government should be able to impose ice dues on shipping using the river ports somewhat along the following lines:

(a) Ships to be assessed by gross registered tonnage or some similar "unit".

(b) Discount for vessel's "ice classification".

(c) Dues to be levied on shipping navigating in Gulf/ River area only between specific dates (say 15 December to 1 April) and not spread over all shipping throughout the year.

(d) All shipping transitting the Gulf to enter or leave the "river" ports pay same base rate per G.R.T. or "unit" (subject to (b) above) and calculated on 59% of total Gulf icebreaking costs.

(e) When upriver from demarcation line between "river" and "gulf" ships to be charged a base rate per G.R.T. or "unit" (subject to (b) above) but subjected to a "distance multiplier" or "District charge" according to the mileage of channel, or Districts navigated.

(f) The basic cost per G.R.T. or "unit" could be worked out using the traffic figures and icebreaking costs from the previous season; i.e., the current season's traffic would bear the cost of the previous season's operations. It is true the amount of shipping and

> the G.R.T. or "units" would fluctuate from year to year so that if the current season's traffic is less than the previous year there would be a slight deficit, but if greater there would be a slight surplus.

Although not technically a Gulf Port, Sydney, which is of direct concern to the Nova Scotia Government, is sometimes affected by ice conditions and is therefore worthy of comment as a special case. Senior representatives of the Federal Government very often raise the question that if ice dues are imposed they would be detrimental to shipping using Sydney and therefore how can the Provincial Government make an issue of imposing ice dues on shipping.

This matter needs placing in its proper perspective. First and foremost, any icebreaking assistance provided to the Sydney/Port Aux Basques CN Ferry service is a federal responsibility under the terms of Confederation. Secondly, a study prepared for the Cape Breton Development Corporation by NORDCO LTD. dated April 1981 on Sea Ice Conditions in Sydney Bight shows that ice at Sydney is not a hindrance of any significance to shipping. Devco's Press Release on this study dated May 26, 1981, states, inter alia:

> "...... The study concluded that conditions that could prevent navigation in the harbour area are rare......"and"...... The study by NORDCO refutes the misinformation that existed over the years regarding the severity of ice conditions through the winter and spring months in Sydney Harbour. It shows that Sydney Harbour can be entered and left throughout the year."

As a concluding comment, it would seem appropriate to re-emphasize that the provision of free icebreaking and ship escort services on the St. Lawrence river ports is nothing short of a direct subsidy to benefit the economy of Quebec to the detriment of Nova Scotia. A subsidy, moreover, somewhere in the region of $10½ million, which is concentrated into four months or less each year. This subsidy if applied to the total container traffic which moved through Halifax in 1981 (1,785,460 tons) would mean a subsidy approaching $6.00 per ton. With an average of 12 tons per TEU this would reduce the rail rate by about $72.00 per TEU. In practice, the figure would be higher. If 20% of all container traffic through Halifax is "regional" and 80% is "in transit" from Montreal and points west, then this rail subsidy would be $7.30 per ton or about $88.00 per TEU.

Even with the addition of the general breakbulk cargo tonnage (392,000) to the containerized cargo tonnage the above figures are only reduced very slightly. In this case, the total tonnage becomes 2,177,460 and the cost per ton for all movements is $4.82 or $57.80 per container and for the 80% - 20% split it is $6.00 per ton or $72.00 per container.

ATTACHMENT TO
APPENDIX E-2

1/7/76

INSTITUTE WARRANTIES

1. Warranted no:—
   - (*a*) Atlantic Coast of North America, its rivers or adjacent islands.
     - (i) north of 52° 10′ N. Lat. and west of 50° W. Long.;
     - (ii) south of 52° 10′ N. Lat. in the area bounded by lines drawn between Battle Harbour/Pistolet Bay : Cape Ray/Cape North ; Port Hawkesbury/Port Mulgrave and Baie Comeau/Matane, between 21st December and 30th April both days inclusive.
     - (iii) west of Baie Comeau/Matane (but not west of Montreal) between 1st December and 30th April both days inclusive.
   - (*b*) Great Lakes or St. Lawrence Seaway west of Montreal.
   - (*c*) Greenland Waters.
   - (*d*) Pacific Coast of North America its rivers or adjacent islands north of 54° 30′ N. Lat., or west of 130° 50′ W. Long.
2. Warranted no Baltic Sea or adjacent waters east of 15° E. Long.
   - (*a*) North of a line between Mo (63° 24′ N. Lat.) and Vasa (63° 06′ N. Lat.) between 10th December and 25th May b.d.i.
   - (*b*) East of a line between Viipuri (Vyborg) (28° 47′ E. Long.) and Narva (28° 12′ E. Long.) between 15th December and 15th May b.d.i.
   - (*c*) North of a line between Stockholm (59° 20′ N. Lat.) and Tallinn (59° 24′ N Lat.) between 8th January and 5th May b.d.i.
   - (*d*) East of 22° E. Long, and south of 59° N. Lat. between 28th December and 5th May b.d.i.
3. Warranted not North of 70° N. Lat. other than voyages direct to or from any port or place in Norway or Kola Bay.
4. Warranted no Behring Sea, no East Asian waters north of 46° N. Lat. and not to enter or sail from any port or place in Siberia except Nakhodka and/or Vladivostock.
5. Warranted not to proceed to Kerguelen and/or Crozet Islands or south of 50° S. Lat., except to ports and/or places in Patagonia and/or Chile and/or Falkland Islands, but liberty is given to enter waters south of 50° S. Lat., if *en route* to or from ports and/or places not excluded by this warranty.
6. Warranted not to sail with Indian Coal as cargo:—
   - (*a*) between 1st March and 30th June, b.d.i.
   - (*b*) between 1st July and 30th September, b.d.i., except to ports in Asia, not West of Aden or East of or beyond Singapore.

27-5-76

(PRIVATE AND CONFIDENTIAL)

ATTACHMENT TO
APPENDIX E-2

NORTH AMERICA (ATLANTIC)

MINIMUM ADDITIONAL PREMIUMS FOR CANCELLING No. I (a) (ii) AND (iii) OF THE INSTITUTE WARRANTIES.

Warranted vessels properly fitted with and equipped for the use of wireless direction finding apparatus, radar, gyro compass and echo sounding device.

The rates set out in this scale are minimum rates applying to vessels not over 15 years old. For vessels over 15 years of age see Appendix 2.

Vessels intending to navigate in the Gulf of St. Lawrence between 15th December and 30th April b.d.i. must, at least 36 hours before entering the Gulf, request the Ice Information Officer at Sydney, N.S. or where appropriate the District Marine Agent at Quebec to supply information regarding weather and ice on the proposed route and must take into account any recommendations received in replies. Vessels are not to proceed if any reply advises that it is unsafe to do so. Vessels engaged in continuous local trading are to maintain close contact with the navigational authorities in the area and be guided by their recommendations.

Each In and Out Voyage or v.v.	Periods (b.d.i.)	Hulls Insured W.A. & F.P.A. Unless		Hulls Insured F.O.D. & F.P.A. Abs.		Interests Insured T.L.O.
		Per ton on G.R.T. *plus* US $ †	Percentage on Insured Value	Per Ton on G.R.T. *plus* US $ †	Percentage on Insured Value	Percentage on Insured Value
Area I(a)(ii) South of 52° 10′ N. Lat. in the area bounded by lines drawn between Battle Harbour/Pistolet Bay; Cape Ray/Cape North; Port Hawkesbury / Port Mulgrave and Baie Comeau/ Matane.	21st Dec.—15th Jan. & 16th Apl.—30th Apl.	.125	.0625%	.065	.0625%	.0625%
	16th Jan.—4th Apl.	.50	.1875%	.25	.1875%	.1875%
	5th Apl.—15th Apl.	.25	.125%	.125	.125%	.125%
	But Ice Class 1 vessels no A.P. prior to 16th Jan. & after 15th Apl.					
Area I(a)(iii) West of Baie Comeau/ Matane (but not west of Montreal)	1st Dec.—15th Dec., & 21st Apl.—30th Apl.	.125	.0625%	.065	.0625%	.0625%
	16th Dec.—31st Dec. & 1st Apl.—20th Apl.	.50	.125%	.25	.125%	.125%
	1st Jan.—31st Mar.	.75	.1875%	.375	.1875%	.1875%
	But Ice Class 1 vessels no A.P. prior to 1st Jan & after 20th Apl.					

OVERLAPPING AREAS AND/OR PERIODS. If an inward or outward passage overlaps two or more areas or periods, the highest area rate and/or period rate shall be charged. If an inward passage is made in one period and an outward passage in another or vice versa the rate to be charged is 50% of the in-and out voyage rate for each period concerned.

SEASON CANCELLATION	Periods (b.d.i.)	Hulls W.A. & F.P.A. Unless Per ton	Percentage	Hulls F.O.D. & F.P.A. Abs. Per Ton	Percentage	T.L.O. Percentage
Excluding Continuous Local Trading						
Area I(a) (ii)	21st Dec.—30th Apl.	1.00	.375%	.50	.375%	.375%
Areas I(a) (ii) and (iii)	1st Dec.—30th Apl.	1.50	.5625%	.75	.5625%	.5625%
Continuous Local Trading						
Area I(a) (ii)	21st Dec.—30th Apl.	2.00	.75%	1.00	.75%	.75%
Areas I(a) (ii) and (iii)	1st Dec.—30th Apl.	3.00	1.125%	1.50	1.125%	1.125%

Short Periods of Continuous Local Trading.

The appropriate scale additional premium for one in-and-out ocean voyage is to be applied for each 15 days or part thereof. Where there is also an inward or outward ocean passage, the appropriate rate for the passage is also to be paid.

For vessels possessing Lloyd's Register Ice Class, the additional premium may be reduced by:—

Ice Class 1.—70%
Ice Class 2.—30%
Ice Class 3. 15%:— also applicable to vessels annotated in Lloyd's Register "Str. nav. ice".

The Joint Hull Committee will give consideration to equivalent standards of other Classification Societies.

†Premiums per G.R.T. are expressed in US $ and must be converted to policy currency at the current rate of exchange.

Overlapping Policies.—Where policies expire during a period for which an A.P. is payable, thereby causing overlapping, Underwriters shall make fair and reasonable arrangements in the event of additional premiums becoming due on two sets of policies.

Freight. The A.P. payable on Freight is to be the T.L.O. rate plus the rate per cent produced by the tonnage A.P. on the full insured value of the H. & M. calculated as if the vessel were insured on F.P.A. absolutely conditions.

Dual Valuation. (Hulls - [illegible]). In cases of dual valuation, the "Percentage on Insured Value" is to be applied to the value insured against Total Loss.

Excess Conditions. No reduction to be made in the rates except that where the policy conditions contain a deductible of US $2.50 per G.R.T. or over (minimum US $6,250 or US $31,250 or over individual cases may be submitted to the Joint Hull Committee for consideration.

APPENDIX 1.

ATTACHMENT TO
APPENDIX E-2

APPENDIX ON CUMULATIVE

ADDITIONAL PREMIUMS FOR BREACHES OF INSTITUTE WARRANTY No. 1 (a) (i).

1. Intermediate calls on direct route:—

Additional premium appropriate to the waters covered by the scale that produces the higher (or highest) bulk premium plus a further 12½% of the additional premiums shown for policy conditions that would be required by each of the other scales involved. The total of these further additional premiums shall be limited to 25% of the bulk premium for policy conditions payable under the highest scale adjusted where necessary for age of vessels and deficiencies in navigational aids.

2. Intermediate calls other than on direct route:—

Additional premium appropriate to the waters covered by the scale that produces the higher (or highest) bulk premium plus a further 25% of the additional premiums shown for policy conditions that would be required by each of the other scales involved. The total of these further additional premiums shall be limited to 50% of the bulk premium for policy conditions payable under the highest scale, adjusted where necessary for age of vessels and deficiencies in navigational aids.

Where excess conditions apply, the excess or (in the event of different excesses being applicable to different scales involved) the higher excess shall apply throughout the voyage.

In all cases, additional premiums required for breaches of Warranties Nos. 1(a) (ii) and 1 (a)(iii) and other breaches of trading Warranties shall be paid in addition to the above.

APPENDIX 2.

1/11/69

APPENDIX ON OVERAGE ADDITIONAL PREMIUMS

The Joint Hull Committee recommends the following minimum age additionals:—

Vessels over 15 years old but not over 20 years old	25%	additional but approved vessels 12½% additional
War built tonnage	100%	additional but approved vessels 50% additional
Other vessels over 20 years old but not over 25 years old	30%	additional but approved vessels 15% additional
Other vessels over 25 years old	At least 40% but	approved vessels 20% additional

(The above recommendations do not apply to the Cook Inlet, Alaska Scale.)

APPENDIX 3.

15/2/71.

VESSELS ON RESTRICTED WARRANTIES

Vessels trading on restricted warranties should have a notional loading applied to the annual rate to extend to Institute Warranties before calculation under these scales. Any actual additional premium required to cover waters between those stipulated in the policy and those covered by the scale should also be charged.

APPENDIX E-3

DREDGING COSTS

This analysis of the impact of dredging costs confines itself to discussion of federal government funded dredging activities which are carried out under the aegis of a Federal Government Department or Crown Corporation (Transport, Public Works, NHB, etc.). It does not concern itself with the costs of any dredging activities carried out and fully paid for by the commercial sector.

Costs for dredging fall into two categories:

(a) Capital Costs for the initial establishment or improvement (widening/deepening) of channels or approaches to ports and in the immediate vicinity of or alongside port facilities.

(b) Maintenance Costs for any follow-up or continuing dredging needed to maintain the required depth or width of channels or approaches to and within ports and their facilities.

Source material needed to assess the impact of non-recovery of dredging costs, or even for interpolation to get "ball park" figures is very sparse. However, by using information contained in Ministerial replies to Members' questions in Parliament over the past 7 or 8 years and information in the written response to Provincial Government questions posed to Transport Canada for the CTC hearings into the CP/Dart acquisition, it has been possible to provide an "indication of magnitude".

Capital Costs

The information available on capital costs incurred for dredging new channels, approaches and alongside berths or for widening or deepening existing dredged areas is very sparse. In the Ministerial reply to Parliamentary Question 2356, dated April 20, 1977, reference is made to dredging being carried out in 1976 at Cap Sante, Cap a la Roche, Cap Charles and downstream of the Yamachiche Bend at a cost of $942,000, which is presumed to be a capital cost.

In the Ministerial reply to Parliamentary Question 1896, dated February 21, 1977, a capital cost of $19,330,000 is given for dredging at Quebec for the Golden Eagle refinery and in the written reply to the Provincial questions to Transport Canada for the CTC hearings, a capital cost of $2.6 million is given as the cost of initial dredging at Gros Cacouna.

The above are the only three instances of capital costs that are identifiable as having been incurred during the last six years. However, this does not mean to say that there has been no other capital costs for dredging in the St. Lawrence during that period. The three instances quoted above total $22,872,000.

Maintenance Dredging

As with the Icebreaking Costs, there are even several anomalies and areas of ambiguity in the different sources of the very sparse amount of material available. For instance, in response to the question "What are the yearly costs for dredging services in the Gulf and St. Lawrence River by Transport Canada for each year since 1974?" the information in Table I was provided. This is qualified by statements that the costs given are "contract costs" only and do not include administration costs or costs of sounding (presumably they mean hydrographic surveying") and that they are for maintenance dredging only.

Furthermore, it is not clear whether the costs in the table attributed to NHB are for dredging operations listed under (ii) Department of Public Works above or not. Presumably the NHB costs refer to dredging operations relating to facilities within the three ports and not to any main shipping channel which traverses their port areas.

There are other anomalies in this table, for instance under "Coast Guard" there are some wild fluctuations which would seem hard to account for if the costs given do in fact only cover "maintenance" dredging - note the 1.3 million jump for the Montreal district in 1977; the sudden appearance of very large costs for North Traverse in 1977 and subsequent years; and the much higher than normal cost for Quebec District in 1974.

The answer to the North Traverse anomaly can be found in the Ministerial answer to Parliamentary question No. 2493, dated May 13, 1982, concerning dredging costs for the Golden Eagle Refinery at St. Romuald. This states that the capital costs of dredging during construction of the Refinery from 1971 to 1974 were 19.2 million dollars, and also gives maintenance dredging costs for the years 1976 to 1980 which coincide with those in Table IV. However, the significant issue here is that the reply also states that the cost attributable to maintaining the 41 foot deep channel to the refinery "cannot be segregated from the total cost of dredging from which other shipping such as grain traffic also benefits". It seems significant that until the Golden Eagle Refinery was constructed other shipping presumably managed adequately without this dredging.

In this connection, it is also worth noting that in a previous reply to a question on the same topic (No. 1896, dated 21 February 1977) it was indicated that the beneficiary of the dredging would be the "Port of Quebec and particularly the Golden Eagle Refinery". The same answer also gave an estimated cost for annual maintenance dredging in the region of $750,000 allowing for inflationary trends whereas the actual costs as shown in Table I have proven to be just about double that estimated.

As regards maintenance dredging carried out in the three ports of Montreal, Trois Rivieres and Quebec, there are discrepancies between the information given in Table I and the Ministerial reply to Parliamentary Question 2356, dated April 1977, with those for Montreal being of a major proportion. These are illustrated in the following tables:

TABLE I

ST. LAWRENCE SHIP CHANNEL

MAINTENANCE DREDGING COSTS 1974 - 80

	THOUSANDS OF DOLLARS						
	1974	1975	1976	1977	1978	1979	1980
COAST GUARD							
MONTREAL DISTRICT	285	181	762	2,001	652	225	363
NORTH TRAVERSE				1,081	1,623	1,421	1,525
SAGUENAY RIVER					490		394
QUEBEC DISTRICT (OTHER)	1,560	25	191	-	304	-	108
SUB-TOTAL	1,845	206	953	3,082	3,069	1,646	2,390
NATIONAL HARBOURS BOARD							
PORT OF MONTREAL	98	111	112	121	180	156	143
PORT OF TROIS RIVIERES	22	50	39	114	59	3	61
PORT OF QUEBEC	50	175	-	-	278	-	-
SUB-TOTAL	170	336	151	235	517	159	204
GRAND TOTAL	2,015	542	1,104	3,317	3,586	1,805	2,594

TABLE II

MONTREAL

MAINTENANCE DREDGING COSTS

(Thousands of Dollars)

	PER PARLIAMENTARY QUESTION 2356 (RE: N.H.B. COSTS)	PER TABLE I N.H.B. (PORT OF MONTREAL)	PER TABLE I COAST GUARD (MONTREAL DISTRICT)	TOTAL COLUMN (2)+(3)
1970	242	N/A	N/A	N/A
1971	264	N/A	N/A	N/A
1972	297	N/A	N/A	N/A
1973	374	N/A	N/A	N/A
1974	423	98	285	383
1975	511	111	181	292
1976	523	112	762	874
1977	N/A	121	2,001	2,122
1978	N/A	180	652	832
1979	N/A	156	225	381
1980	N/A	143	363	506

It will be noted that the total N.H.B. costs for the three years 1974/75/76 total $1,457,000 from the first column, whereas from the second column they only total $321,000 or a discrepancy of about $1,136,000. Even if the Coast Guard costs for Montreal District given in the third column are added in (total given in last column), the Table I figures amount to $1,549,000 and only exceed the first column totals for the three years under consideration by $92,000.

Similar, but not as drastic, discrepancies appear when the same exercise is carried out for the other two ports. In the case of Trois Rivieres, the N.H.B. figures coincide for 1974 (22,000) for 1975 they differ by $10,500 (60,500 and 50,000) and for 1976 they differ by nearly $13,000 (26,145 and 39,000). In Quebec, the 1974 and 1976 figures coincide but for 1975 they differ by nearly $11,000 (164,175 and 175,000).

It is worth pointing out that the N.H.B. figures only for Trois Rivieres and Quebec are not too widely divergant without having to add the appropriate "district" Coast Guard costs, whereas those for Montreal show discrepancies with or without including them.

The total annual maintenance dredging costs incurred by N.H.B. at the three river ports for the seven years 1970 - 1976 inclusive are as follows:

Montreal	$2,633,159	(average per year = $376,166)
Trois Rivieres	$ 288,085	(average per year = $ 41,155)
Quebec	$ 271,279	(average per year = $ 38,754)

The comparison of costs given in Transport Canada's written response to the Provincial Governments' questions with those in the various ministerial replies only serves to highlight the differences and does not assist in the attempt to achieve an "order of magnitude" of costs. In order to arrive at some sort of "order of magnitude" it is felt that the figures provided in response to the Province's questions should be used even though they appear to be lower than those given in Parliamentary answers when comparison has been possible (see Table II above).

Thus, the quantification of maintenance dredging costs must center around the information contained in Table I together with that which was given in response to the follow up question by the Province which was to ascertain how much was spent by agencies other than Transport Canada on dredging services in the River and Gulf. The response of Transport Canada was that the limit of the Gulf is a line from Gaspe to the east end of Anticosti Island to Natashquan and that dredging was carried out by Public Works Canada in "various harbours" during the period 1975 - 1980 as the following table shows:

TABLE III

DPW DREDGING IN VARIOUS ST. LAWRENCE HARBOURS

1975	$137,000	
1976	$146,000	
1977	$851,000	
1978	$446,000	(plus 2.6M for capital
1979	$321,000	dredging at Gros Cacouna)
1980	$217,000	

From the above, it must be assumed that the costs listed must be added to those in Table I in order to get a total for the costs of the entire maintenance dredging operations in the St. Lawrence Gulf and River. These annual totals then became:

TABLE IV

TOTAL MAINTENANCE DREDGING - GULF AND RIVER

(Thousands of Dollars)

YEAR	TABLE IV (COAST GUARD/N.H.B.)	TABLE VI (D.P.W.)	TOTAL
1974	2,015	N/A	2,015 + N/A
1975	542	137	679
1976	1,104	146	1,250
1977	3,317	851	4,168
1978	3,586	446	4,032
1979	1,805	321	2,126
1980	2,594	217	2,811

This above shows a minimum of $679,000 for maintenance dredging in 1975 to a maximum of $4,168,000 in 1977 with an annual average of at least $2,440,143. In other words, it would appear that shipping using the St. Lawrence ports benefits by what amounts to a direct federal subsidy of approximately $2.5 million dollars a year for dredging.

Recovery of Costs for Dredging Activities

As far as the cost recovery programmes of the Federal Government are concerned, it would seem logical that the costs for dredging services should be recovered as follows:

(i) Capital costs for initial dredging or the subsequent widening or deepening of channels, approaches to and within port facilities which is directly or exclusively carried out for the benefit of any specific port or facility should be allocated as a "capital improvement" cost against that port or facility and be recovered in accordance with the accepted practice for the recovery by government of such costs. Examples:

- Golden Eagle Refinery at St. Romuald, Quebec $19.2 million and Gros Cacouna $2.6 million.

(ii) On the other hand, costs for Maintenance dredging which is carried out for the direct and exclusive benefit of any port of facility should be recovered as part of the port dues paid by shipping using that port or facility.

(iii) Both the Capital costs and Maintenance costs for dredging channels or approaches which benefit more than one port or facility should be recovered from all shipping using the channels or approaches as are pilotage dues.

(iv) Dredging dues should be assessed and rated according to vessel size in a similar manner to "pilotage units"; i.e., vessels over a certain draught only would pay dredging dues and the larger, deeper draught vessels which benefit most from the dredging would pay more than the smaller shallower draught vessels.

(v) Unlike "Ice Dues" which would be assessed only during the winter months and only on the ships actually benefitting from the services during that period, dredging charges should be levied on a year round basis and charged against ships actually benefitting from the services as outlined in (ii), (iii), and (iv) above.

It is worthy of note that most of the new generation of large trans-oceanic container ships now coming into service, or on order, are of 10.7 metre or 35 foot draught and over in salt water. The 10.7 metre or 35 foot depth at low water in the St. Lawrence river and the Port of Montreal will not be sufficient for the new generation ships unless costly dredging is carried out to further widen and deepen the channels, approaches and alongside the container berths. Who should pay for this? The ships could use Halifax without the need for any costly dredging!

APPENDIX E-4

NAVAID COSTS

It is informative to repeat the response that was given in reply to the Provincial question to Transport Canada in preparation for the CTC hearings on the CP/Dart situation held at Halifax in 1981.

QUESTION 5: What are the yearly costs of Navigational Aids in the Gulf and St. Lawrence River by Transport Canada for each year since 1974?

ANSWER:

ASSUMPTIONS: (1) The term Gulf and St. Lawrence River is taken to mean the main shipping channel from the Gulf to the Port of Montreal and is understood to be a single geographic unit - not two areas such as (1) Gulf and (2) St. Lawrence.

(2) The geographic area in which aids would assist through traffic runs between:
- (a) in the west - Port of Montreal
- (b) in the east - a line from Natashquan on the North Shore to Heath Point on eastern tip of Anticosti Island, then to the tip of the Gaspe Peninsula.

Aids within this area have been segregated between those serving the main channel and those serving other users.

(3) The entire cost of the Anticosti Decca chain in included although its benefits may extend beyond the defined geographic area.

(4) Navigational Aids include Radio Beacons, Fixed Conventional Aids, and Floating Aids as included in the Aids to Navigation activity.

See Table I on next page.

TABLE I

7 YEAR SUMMARY OF AIDS TO NAVIGATION COSTS FOR THE ST. LAWRENCE RIVER & GULF

TYPE OF COST	MILLIONS OF DOLLARS 1980/81	1979/80	1978/79	1977/78	1976/77	1975/76	1974/75
OPERATIONS & MAINTENANCE	4.9	4.1	4.2	4.5	4.4	4.3	3.8
DEPRECIATION	0.7	0.8	0.8	0.8	0.8	0.8	0.8
INTEREST	1.2	1.0	0.9	0.7	0.9	0.8	0.9
TOTAL	6.8	5.9	5.9	6.0	6.1	5.9	5.5

The Committee makes the following observations in reference to the above. The total annual costs given are those for Navaids used by shipping in the main channel from seaward to Montreal only. No costs for approaches to ports or facilities off the main channel such as Sept. Iles, Baie des Ha! Ha! or Chicoutimi have been included.

APPENDIX F-1

ELEMENTS OF HALIFAX PORT COSTS

(Extracted from Shipping Federation Manual of Port Expenses)

APPENDIX F-1

(Extracted from the Shipping Federation
Manual of Port Expenses)

PORT OF HALIFAX, N.S.

PORT EXPENSES

1. **PILOTAGE:** See Atlantic Pilotage Authority Tariff, Page 17. (not included)

2. **TOWAGE:** See Schedule immediately following on Page 29. (Appendix F-1:2)

3. **HANDLING LINES:** Straight time - per operation - $300.00 plus overtime where applicable.

4. **HARBOUR DUES:**
   - a) Canadian registered vessels in coastal trade ——— 1.74¢ per G.R.T.
   - b) All other vessels ——— 3.50¢ per G.R.T.
   - c) Minimum charge for (a) ——— $ 11.40
   - d) Minimum charge for (b) ——— $ 22.80

5. **DOCKAGE CHARGES:**
   - a) 2.90¢ per G.R.T. for first 12 hour period or part thereof.
   - b) 2.90¢ per G.R.T. for second 12 hour period or part thereof.
   - c) 1.74¢ per G.R.T. for each additional 12 hour period or part thereof.

   Minimum charge ——— $ 22.80

6. **SHIPPING FEDERATION DUES:** See Schedule on Page 11. (Appendix F-1:3)

* 7. **FRESH WATER:** 58¢ per metric ton, plus $30.00 service charge.

* 8. **ELECTRICITY:** Connecting and disconnecting power lines for each outlet from the Board's power circuits ——— $ 18.00

   Power, per kilowatt hour ——— 0.138

9. **AGENCY FEES:** See Schedule on Page 7. (Appendix F-1:4 and F-1:5)

10. **M.E.A. ASSESSMENT:** See Schedule on Page 102. (Appendix F-1:6)

* Effective January 1, 1982.

PORT OF HALIFAX, N.S.
SCHEDULE OF HARBOUR TUG RATES AND CONDITIONS

Area 1 - Halifax Waterfront from Pier 9 to Pier C, Dartmouth Waterfront from Tufts Cove to Sugar Refinery Wharf.

Area 2 - Woodside and Imperoyal Waterfront from Irving Oil Wharf to Eisner Cove.

Area 3 - Eastern Passage from Eisner Cove South.

Area 4 - Bedford Basin.

Rates per Tug According to Vessel Gross Registered Tonnage

	0 to 1000 Per Tug	1001 to 10000 Per Tug	1001 to 20000		20001 to 30000		30001 and Over	
			One Tug	Ea. Add'l Tug	One Tug	Ea. Add'l Tug	One Tug	Ea. Add'l Tug
1. (a) Docking or Undocking Vessels: Area 1	260	490	690	350	730	440	780	460
(b) Docking or Undocking Vessels: Area 2	260	630	840	430	880	530	940	570
(c) Docking or Undocking Vessels: Area 3 & 4	360	650	900	450	920	560	990	600
2. Shifting Vessels Between Piers or Between Pier and Anchorage								
(a) Within Area 1	270	630	840	430	880	530	940	570
(b) Within Area 2	270	650	900	450	920	560	990	600
(c) Within Areas 3 & 4	370	670	920	460	960	570	1030	630
(d) Between Areas 1 & 2	270	650	900	450	920	560	990	600
(e) Between Areas 1 & 3 or 4	370	670	920	460	960	570	1030	630
(f) Between Areas 2 & 3 or 4	370	730	990	480	1020	620	1100	650
(g) Between Areas 3 & 4	440	780	1060	530	1100	650	1190	720

3. Dead ships additional 50% to above rates (excluding barges).

4. Assisting vessels on to or off marine repair facilities - additional 25% to above rates.

5. Assisting on hourly basis $300.00 per hour - per tug.

6. Delivery of water - on hourly basis (minimum one hour).

7. Services not covered in above items - rates by arrangement.

8. Services performed on statutory holidays - additional 12% to above rates.

* Effective January 1, 1982

THE SHIPPING FEDERATION OF CANADA

SCALE OF MINIMUM AGENCY FEES
EASTERN CANADIAN PORTS INCLUDING CHURCHILL, MANITOBA

SCHEDULE - BASIC FEES

DRY CARGO VESSELS

1. Discharging only, or loading only, full or part cargo: including lightening and/or shifting cargo from seaway draft

a)	cargoes not exceeding 5,000 tonnes	1450
b)	over 5,000 tonnes	1750
c)	over 10,000 tonnes	2000
d)	over 20,000 tonnes	2250
e)	over 40,000 tonnes	2500
f)	over 80,000 tonnes	2750
g)	over 160,000 tonnes	3000

2. Discharging and loading full or part cargo (same agent, same port): For each operation, above fees less 25%.

3. Supervisory services. Acting on behalf of owners when vessel consigned to charterers agent or acting on behalf of charterers when vessel consigned to owners agent: 50% of fees as per item 1 or 2 and all surcharges.

4. Owners agency (time chartered vessel). Attending to husbandry matters on behalf of owners for vessels on time charter; per port. 950

5. Vessel calling for:

a)	orders and/or bunkers only	720
b)	delivery or re-delivery only	720
c)	drydocking only	875
d)	fitting or securing for grain or other bulk cargo only	875
e)	cleaning for grain or other bulk cargo only	875

6. After the first 3 days an additional fee of $100.00 per day will be assessed on all the above items.

7.

a)	Attendance on vessels transitting Seaway westbound	900
b)	Attendance on vessels transitting Seaway eastbound	900
c)	Vessels stopping at Montreal either before transitting Seaway westbound or after transitting Seaway eastbound for purposes of installing or removing Seaway fittings (excluding radio telephones)	550

8. Supervising, coordinating and accounting services performed by Montreal General Agent in connection with vessels calling at U.S. and Canadian Great Lakes Ports.	
a) per port	400
b) minimum per Great Lakes round voyage	550

LIQUID CARGO VESSELS

9. 80% of items 1 and 2 except for those vessels carrying multiple parcels.

SCHEDULE B - ADDITIONAL FEES

1. When vessel required to call at more than two berths in any one port, under the same agent - for each extra berth	200
2. When agent is required to arrange:	
a) delivery or re-delivery	360
b) drydocking	450
c) fumigation	360
d) fumigation and crew accomodations	720
e) fitting or securing for grain or other bulk cargoes	540
f) cleaning for grain or other bulk cargoes	450
g) scrap cargo	by arrangement
h) over 5 Bills of Lading - per additional B/L	by arrangement
3. When attention required after vessel's departure:	
a) stowaways and crew members missing or deserting - minimum per man	200
b) crew members remaining in hospital per man - first seven days or part thereof	200
per week thereafter	100
4. Fees for attending crew change (per operation)	
a) first person	85
b) for each additional person	45
c c) 10 to 25 persons (lump sum)	450
d) 26 persons and over	by arrangement

II CHURCHILL, MANITOBA

At the port of Churchill, the applicable fees will be 120% of the fees specified in schedule "A" and schedule "B" above.

Effective: Vessels arriving on or after
January 1, 1982.

MARITIME EMPLOYERS' ASSOCIATION (SHORE LABOUR)
ASSESSMENTS FOR JOB SECURITY & ADMINISTRATION

Halifax, N.S., Saint John, N.B.

Container Cargo	$1.16 per 2,000 lb. or $1.278 per metric of 2204.6 lbs.
Grain	$1.16 per 30 tons of 2,000 lbs. or $1.278 per 30 metric tons of 2204.6 lbs.
Bulk	$1.16 per 10 tons of 2,000 lbs. or $1.278 per 30 metric tons of 220 2204.6 lbs.
Automobiles	$1.16 per unit
Conventional Cargo	$1.16 per 2,000 lbs. or 40 cubic ft. OR $1.278 per metric ton of 2204.6 lbs. or 1.041 per cubic meter

The payment of assessments is the responsibility of the Company who pays the stevedoring contractor.

Effective January 1, 1982.

APPENDIX F-2

PORT CHARGES IN CANADA

Background

The National Harbours Board administers Canada's major ports and provides the facilities which include wharves, sheds, grain elevators, open cargo areas, etc., to accommodate the waterborne flow of Canada's goods.

The National Harbours Board charges for the use of its facilities by means of a standard tariff applicable to all ports for:

1. Harbour dues assessed to ships.

2. Berthage assessed to ships.

3. Top wharfage assessed to cargo.

(Note: the West Coast tariffs differ from East Coast tariffs.)

4. Rental of open berths, outdoor storage areas, and cargo transit sheds. (These are charged in several but not all ports.)

5. Guarantees of minimum top wharfage revenue against specific berths or terminals.

Historically, the method of uniform charges for harbour dues, berthage, and top wharfage placed all ports on an equal basis. However, ports varied in their assessment and rates charged for rentals of open space and buildings, and many ports have no rental charges for these facilities.

Current Evolution in Port Charges and Their Application.

The level of port revenues was an integral part of the NHB "Business Plan" approach to port planning which they adopted in 1979 to make each port "self-financing". An average 15% return on investment appears to be a goal of the business plan. Much is being said about increases, but no policy or method has yet become evident and pricing appears to be in a state of evolution.

Among the methods being promoted to gain additional revenue is to lease certain port installations on an annual basis to stevedoring or shipping companies. This removes the risk of fluctuating revenues from the National Harbours Board by assuring an annual income. One result of leasing all facilities is to considerably increase the charges to be assessed against irregular ships, because the terminal operator has to recover his high fixed National Harbours Board charges, which probably include a minimum top wharfage guarantee.

Port terminals on a leased basis are suited to high volume operations such as container terminals, oil terminals, and bulk cargo terminals. However, leasing is not necessarily appropriate in all ports, especially for facilities handling low and irregular volumes of general cargo.

The National Harbours Board appears to have a programme to transfer its liability for municipal taxes to the operators of port facilities. This is accomplished by leasing these facilities to the operators whereby the lessee is either taxes directly by the City, generally at a higher rate, or the National Harbours Board is collecting taxes from the lessee and remitting to the City.

Increased Charges.

1. Harbour dues, berthage, and top wharfage rates have been increased frequently, sometimes by increments exceeding the rate of inflation. These are shown in the attached table.

TABLE I

N.H.B. RATE INCREASES

	Tariff Increases		CPI (Transportation Sector)
1976	Dec. 1	10.0%	5.7%
1977		----	7.2%
1978	Mar. 1	6.0%	12.3%
1979	Mar. 1	9.5%	----
	Nov. 1	15.0%	13.2%
1980	Nov. 1	15.0%	20.2%

Although there were two increases in 1979, there was no increase in 1977, and the CPI (Transportation Sector) actually surpassed NHB's increases.

These charges are assessed to the ships which in turn must recover them from the cargo.

Top wharfage rates have been increased annually except for two increases in 1979. The top wharfage rates on cargo have been increased a total of about 89% to 93% in the past four years. For example, in the past four years, top wharfage on metals has increased from 74¢ to $1.43 per ton, newsprint and asbestos from 38¢ to 72¢ per ton, and general cargo from 93¢ to $1.78 per ton. These charges are assessed directly to the cargo. These top wharfage increases assessed against millions of tons of cargo have produced very large increases in revenue for the National Harbours Board.

2. Much higher land rentals are being discussed which would be based on the appraised commercial value of the property and the rental rate would be 12% of the value per year. For example, in one port, there has been mention of land rental for paved areas to be increased from about 15¢ per square foot per year to about 50¢, an increase of 233%. There has also been mention of reappraisal of the land values every three years which would increase the rental accordingly, although there would be no other expenditure to warrant further increase.

   Top wharfage covers part of the operating cost and is also related to the use of facilities. In the past the low land rental rate was not significant, but with the policy of increases in land rental combined with top wharfage, they may become excessive.

3. Building rentals may be subject to reassessment.

4. All NHB tenants pay Municipal taxes on leased property. In many cases, the municipal taxes are approaching 80% and 120% of the rentals which are paid for land and buildings, so this is in effect a doubling of this cost.

Concerns.

These changes and charges being promoted by the National Harbours Board have a number of effects.

1. Cost levels in Canadian ports will rise significantly. These charges must be assessed against Canadian goods moving through the ports and therefore affect the marketing of Canadian goods.

2. The combination of increased charges and taxation will make Canadian ports less competitive with high volume ports in the United States, which operate on a fixed rental, have the advantage of scale, and in fact many of them are subsidized. In the United States, many ports are operated by commissions established by the municipalities, or the municipalities are otherwise involved in their creation and operation. United States' ports generally do not pay municipal taxes. Higher costs in Canadian ports can only encourage diversion of Canadian traffic over United States ports. This in turn encourages steamship lines to reduce service to Canadian ports. The subsequent recovery of diverted traffic can be long, difficult, and expensive.

3. Non-uniformity of charges at various Canadian ports can create imbalances in the competitive position of ports. Large variations in land values in certain ports compared with others will create an imbalance in rentals. Variations in municipal tax rates will also cause variable charges which will lead to disparities. This can have severe effects on exporting industries which are captive to specific ports.

Solutions.

What is required is equitable treatment that will ensure not only a fair revenue to municipalities and the National Harbours Board, but also treatment that will result in stability of costs in Canadian ports and maintain their competitive position with ports in the United States.

1. Taxation. A method is needed to assess equitable taxation against facilities on a comparative basis in all competing Canadian ports. A possible solution would be a federal law to regulate the taxes attracted by harbour facilities based on a realistic valuation which takes into consideration that roads, water, sewers, police and security services, snow removal, etc., are not or only partially provided by the municipality. Previous to the implementation of the Municipal Grant Act, 1980, the port received a tax

reduction for certain services (policing, garbage removal and sewage disposal). Now under the new Act, this service deduction has ceased and the port is faced with an increase in Grants in Lieu of Taxes.

This requires also that municipalities recognize the contribution that is made by their respective ports to the local economy and to the commercial status of the city. This is the case in the United States where cities do not tax the ports and in fact in some cities, the reverse can take place, that is, the city can be taxed for port development.

2. National Harbours Board Charges. The National Harbours Board publish a tariff applicable to all ports which will assess harbour dues, berthage and top wharfage. There should not be a charge for land rentals.

   The National Harbours Board should be protected against inefficient use of space and a method found to accomplish this end. A possible solution would be to arrive at a fair land value by averaging the cost of land within the port area. Operators would be required to guarantee a tonnage revenue which would effectively guarantee cost recovery of the land area leased from the Board.

As an incentive to maximize land use, some type of sharing could be arranged which increases the National Harbours Board revenue and also encourages the operator to build volume, and this would help to remain competitive with United States ports.

Buildings should be rented out at a charge to recover their cost over twenty years.

Conclusion.

The charges for the use of facilities in Canada's ports seem to be increasing much too rapidly. These will affect Canadian exports, and Canadian producers who sell overseas. They will thereby affect the Canadian economy and its ability to produce employment. They will affect the contribution of Canadian ports to the economy and the viability of the port industries. It is to be hoped that with greater autonomy under the Canada Ports Act, the new Halifax Port Corporation will be able to reverse these trends.

APPENDIX F-3

SEA/AIR LINKS

The potential for developing Sea/Air traffic through the Port of Halifax (i.e., the sea port and the air port) has been outlined in Section F.8. Reference has also been made therein to the earlier CANAC Distribution Ltd. operations. The accompanying copies of press articles are supportive of the latent potential of this concept.

Air Canada's Sea-Air Offers Speed, Economy

THE Permissive Society notwithstanding, a marriage of convenience does have a place — especially if it's between steamship companies and Canada's national airline, Air Canada. And, the marriage is doing quite nicely, thank you.

Consummated in 1965, its offspring is known as Air Canada's Sea/Air Cargo service — the result of a partnership which has enjoyed growth since its inception.

"What we're doing with Sea/Air is offering an alternative which combines the economy of sea shipment with the speed of air freight," explained Jack Smith, the airline's regional cargo manager.

"The advantages are obvious," he said. "Manufactured goods reach their markets that much sooner, the supplier gets paid quicker, and warehousing costs are trimmed to a minimum."

The cost of Sea/Air shipments are "roughly midway" between direct sea cargo and air freight.

Typical shipments 'sea-aired' across the world are television sets, electronic equipment, optical goods, precision instruments, automobiles and spare parts, cameras, sports equipment, furniture, ball bearings, and machinery.

"There are many, many more," he said. "Sometimes, our cargo terminals look like a well-stocked department store."

The progress of any shipment is monitored by the airline's Cargo Movement Control Centre in Montreal which is linked to Air Canada's ReserVec II computer system.

"As of now, we can trace the whereabouts of any given shipment of goods, at any given time, simply by pushing a few keys on a video display set," said Smith. "We just feed in the appropriate airwaybill number and a pinpoint progress report comes up on the screen in less than two seconds."

The Air Canada Cargo Enquiry Service System (ACCESS), recently installed in Barbados, is an extension of the airline's passenger reservation computer complex and on many on-line stations, replaces the manually-operated teletype system.

"Sea/Air's advantages to the shipper are clear," Smith continued. "It gives him an opportunity to reduce inventory to a minimum, to ship reliably and quickly at a reasonable cost while his product is being closely-watched from origin to destination."

In addition, he said, "a quality analysis is carried out at each month end, so that the time taken for each and every shipment can be assessed and improvements made where necessary."

Smith said Air Canada helped pioneer the Sea/Air concept and that today, the airline is the world's largest carrier in this field.

"Its acceptance, particularly in the Orient and South East Asia, has been tremendous and we're continually having to increase our Sea/Air capacitiy," he said. "To give some idea of just how popular the service is, the annual growth rate has been steady at more than 40 per cent since the year we started."

Smith concluded: "Sea/Air has given us, as an airline, a unique opportunity to work hand in hand with many countries. Now — more than ever before — I'm convinced that trade promotes understanding, and Air Canada's Sea/Air service can help importers and exporters prosper."

AIR boxes move by sea in program

UK - Freight News Weekly.

FRIDAY, JANUARY 8, 1982

WINGATE LAUNCH JAPAN AIR-SEA SERVICE

AN EASTBOUND sea-air consolidation service from Japan has been introduced by Air Wingate for importers who want their goods "in a hurry, but not urgently".

Aimed at UK importers who normally rely on direct air links, the new service offers a considerable cost saving with only a limited sacrifice in door-to-door transit times.

It is operated in conjunction with Nissin Transport and Warehousing, Air Wingate's agents in Japan and uses the Air Canada air-bridge service from Vancouver.

Consignments are containerised at Nissin's port facilities in Yokohama and Kobe and are carried to Vancouver by fast containerships. On arrival, they are transferred by bonded truck to Air Canada's airport terminal and put on the next scheduled flight to the UK.

Transit time from the Japanese seaport to a British airport is usually between 12 and 16 days. This compares with an average of between four and eight days depending on availability, documentation and clearance for a direct air service.

To set against the slower transit times is a rate structure ranging between $2.81 and $3 a kilo, depending on the commodity. Special lower rates are available for regular shipments.

To speed UK Customs clearance, all information, including shipper's instructions, is telexed by Nissin to Air Wingate at least a week before the arrival of the imports.

"This provides what we believe to be the ideal alternative to total surface or total air modes of transport," commented Air Wingate's sales and marketing manager Maureen Kelly.

"The key to the service is the comprehensive pre-arrival advice communications system that has been built into it," she added.

THE SHIPPING FEDERATION OF CANADA

The Shipping Federation of Canada was incorporated in 1903 by Act of Parliament as an association of persons or firms having a common interest in the shipping trade of Canada. Its membership presently consists of 64 shipping firms. Of these, 51 have their principal office for Canada in the Province of Quebec of which 47 are located in Montreal, 5 have their principal office in the Province of Ontario, 4 in Halifax, 3 in Saint John and 1 in Prince Edward Island. These firms represent or operate some 200 Steamship Lines, most of which are foreign but whose vessels call at our ports on the East Coast, the St. Lawrence and in the Great Lakes and in the great majority of cases on a regular basis as they are engaged in Liner trades.

34 of the 64 Members, in addition to their Liner trade activities either as line operators or as agents for a number of Lines, act as agents for vessels in tramp trades, representing either the owners of such vessels or the time charterers as disponent owners or both. Some act as agents for a considerable number of vessels engaged in tramp trades and calling at our ports to load or discharge either dry bulk commodities such as

grain, ore, coal, bauxite, alumina, concentrates, raw sugar, lumber, or such liquid bulk cargoes as petroleum products and chemicals.

The powers of the Federation are exercised by an Executive Council composed of the representatives of twelve of its Member firms in addition to the President and Treasurer who are ex-officio members of the Council. There are three District Committees - Halifax - Saint John - Ontario. The Chairman of each is a member of the Executive Council.

The Annual Report of the Federation gives the composition of the Executive Council, the District Committees and a list of Members and the Lines which they represent or operate.

The Federation publishes a Manual of Port Expenses for Canadian Atlantic, St. Lawrence, Great Lakes ports and Churchill, Manitoba, and updating amendments. This publication has a world-wide circultation.

The main objects for which the Federation was incorporated are best described by quoting from Section 6 of its Act of Incorporation which reads in part:

"6. The objects and powers of the Federation shall be:

(a) To amalgamate and federate, as members thereof, ship owners and shipping agents and such other persons, firms and corporations, as are from time to time interested in the shipping trade of Canada;

(b) To consider all questions affecting the interest of the shipping trade of Canada or other trades connected therewith and the interests of the members of the Federation, and to take such action as the Federation deems advisable to develop and protect the said trades and interest;"

The services rendered by the Federation to its Members cover a variety of activities that are of vital interest to its Members like:

1. Participating on behalf of the entire shipping industry in the negotiating process over tariffs or regulations with the authorities concerned, for instance, with the Pilotage Authorities in the matter of Pilotage Tariffs and Pilotage Regulations, with the National Harbours Board with respect to Harbour Dues and Tariffs of Charges, with the St. Lawrence Seaway Authority with respect to tolls and traffic movements, with the Canadian Coast Guard over traffic control and management with Canadian waters, Safety and Radio Regulations, Collision Regulations etc. . . .

2. Consulting at all times with various Government Departments to give advice on proposed regulations which will affect the trading of the ships operated or represented by its Members, for instance, with the Department of National Revenue for Customs and Excise to coordinate the documentary requirements of the Department with those of the industry in respect of goods entering and leaving Canadian ports.

3. Keeping abreast of all legislation presented to Parliament affecting the shipping industry and making appropriate representations in Committees of the House and Senate.

4. Submitting the views of the shipping industry to Government and more particularly to the Minister of Transport, on proposed legislation like the Maritime Code, legislation related to pollution in Canadian waters and its prevention, legislation on limitation of liability of ship owners for maritime claims, legislation to give effect to International Maritime Conventions as proposed by the International Maritime Organization (IMO), formerly IMCO.

5. Keeping in contact with international maritime organizations like the Baltic and International Maritime Consultative Organization (BIMCO), the Chamber of Shipping of the United Kingdom, etc. . . in order to obtain up to date information on Regulations, Tariffs etc . . . in force in the

various ports in which the ships operated by the Federations's Members will trade and, in turn, supplying the same information to these organizations with respect to Canadian ports so that foreign shipowners and operators when planning voyages to Canada for their vessels will be able to prepare accurate estimates of the charges and expenses to be incurred by their vessels when trading into our ports.

THE SHIPPING FEDERATION OF CANADA

Executive Council and Officers until March 1983
(Alphabetical)

Mr. A. Aksic	Vice-President Zim Israel Limited, Montreal
Mr. H. J. Broad	President B & K Shipping Agency, Montreal
Dr. T. Camu	President March Shipping Limited, Montreal
Mr. K. D. Honegger	President Colley Motorships Limited, Montreal
Mr. H. E. Kane	President Kane Agencies Limited, Saint John,N.B.
Mr. R. L. Kelley	General Manager Manchester Liners Limited, Montreal
Mr. G. D. Kelly	General Manager (North America) C.P. Ships Limited, Montreal
Capt. B. E. Mathews	President B.S.L. Beam Shipping Limited, Montreal
Mr. J. S. Murray	Vice-President Federal Commerce and Navigation Limited, Montreal
Capt. J. Powell	Saguenay Shipping Limited, Montreal
Capt. C. R. Worthington	Halifax Manager Columbus Line (Canada) Limited, Halifax
Mr. P. Young	Morflot Freight Liners Limited, Montreal

Mr. J. A. Crichton (Ex-Officio)	President, The Shipping Federation of Canada, Montreal
Mr. D. A. Short (Ex-Officio)	Vice President, Montreal Shipping Company, Montreal

Chairman of Executive Council

Mr. R. L. Kelley	General Manager Manchester Liners Limited, Montreal

President *

Mr. J. A. Crichton

Treasurer *

Mr. D. A. Short

Secretary *

Mr. B. Pope

Manager, Marine Operations *

Capt. F. C. Nicol

Delegates to Outside Organizations - 1982/83

Canadian Maritime Law Association - Mr. J. Carton

Canadian Ports & Traffic Development Committee - Mr. J. A. Crichton

Montreal Board of Trade - Mr. R. L. Kelley

Chairmen - District Committees - 1982/83

Halifax District Committee - Capt. C. R. Worthington

Saint John District Committee - Mr. J. A. Crichton

Ontario District Committee (Toronto) - Mr. R. L. Kelley

Chairmen - Standing Committees - 1982/83

Pilotage Committee - Capt. F. C. Nicol

Customs Committee - Mr. B. Pope

Dangerous Goods Committee - Capt. F. C. Nicol

---

* Full time employee of The Shipping Federation of Canada

Total Membership - 64
(As of 1981)

i.e.	Quebec	- 51 (47 in Montreal)
	Ontario	- 5
	Nova Scotia	- 4
	New Brunswick	- 3
	Prince Edward Island	- 1
		64

Information on Dues Structure is given in Section F-1 Port Costs.

APPENDIX F-5

THE CANADIAN SHIPPERS' COUNCIL

The general objectives of this organization is to represent the interests of exporters and importers in Canada in respect of ocean transportation and the related intermodal movement of goods moving in Canada's international commerce. A special emphasis is placed on the Council's role as a counterweight to the power inherent in the ocean shipping conference system.

Under the terms of the Shipping Conference Exemption Act of 1979, Conferences engaged in transporting goods into or out of Canada are required to meet (and also to provide sufficient information for the conduct of such meetings) with a "shipper group" representing the interest of importers and exporters. The Canadian Shippers' Council has been designated as this "shipper group" by the Federal government.

The Council membership is made up of 14 organizations and there are 8 large individual corporations with the status of "supporting" membership. Details are given at the end of this Appendix. Insofar as Liner Conference Shipping is concerned, the Council's main operating structure is the Conference Liaison Committee. This is divided into two sections: (1) a West Coast Committee dealing with Conferences serving Western Canada; and

(2) an Eastern Committee dealing with eastern Canada. To ensure consistency, significant policy issues are reviewed at the national level by the Board of Directors.

The Council's mandate focuses primary attention on consultation on a collective basis with liner conferences on general conditions, frequency and quality of service, contract conditions and terms of carriage, general rate increases, tariff structures and surcharges. The Council does not intervene on behalf of individual shippers or industry sector groups in disputes with the Conferences unless they are issues of shared principle adversely affecting other shippers.

These arrangements appear quite satisfactory on the surface but there are some hidden aspects which are worth mentioning:

(1) Although the general objectives state that the Council represents the interests of exporters and importers in respect of ocean transportation and the related intermodal movement of goods, it still appears to concentrate on the Conference aspect alone.

(2) Because of its membership structure, the smaller shippers who do not have a sufficient volume of traffic to negotiate directly with the Conferences on their own behalf must perforce be dependent on whatever trade or industrial organization they belong to (i.e., Canadian Manufacturers Association, and so) or place themselves in the hands of a freight forwarder.

(3) "Eastern Canada" is inclusive of the Port of Montreal and the Great Lakes - thus the interests of the Ports of Halifax and Saint John do not receive necessarily the unbiased consideration they need or deserve as ports serving both national and regional needs. This is evidenced by the still unresolved situation of ocean freights on through bills of lading being the same for Montreal, Halifax and Saint John - a situation which discriminates against importers/exporters in the Atlantic Provinces and hence the regional economy.

F-5:4

The Canadian Shippers' Council
Suite 250, 99 Bank Street,
Ottawa, Ontario, K1P 6B9
Tel: (613) 238-8888 Telex: 053-4888

June 18th, 1982.

MEMBER ORGANIZATIONS OF THE CANADIAN SHIPPERS' COUNCIL

Association of Canadian Distillers

Atlantic Provinces Transportation Commission

The Canadian Chemical Producers' Association

Canadian Export Association

The Canadian Horticultural Council

Canadian Importers Association Inc.

The Canadian Industrial Traffic League

Canadian Lumbermen's Association

The Canadian Manufacturers' Association

Canadian Meat Council

Canadian Pulp and Paper Association

Council of Forest Industries of British Columbia

The Mining Association of Canada

Quebec Asbestos Mining Association

...2/.

Supporting memberships are held by the following individual firms:

British Columbia Forest Products Limited

Celanese Canada Inc.

Crown Zellerbach Canada Limited

Domtar Inc.

Dow Chemical Canada Inc.

MacMillan Bloedel Limited

Noranda Sales Corporation Ltd.

Prince George Pulp and Paper Limited

THE MARITIME EMPLOYERS ASSOCIATION

The Maritime Employers Association (MEA) is a Montreal based association of owners, operators of and agents of deep sea vessels, stevedoring contractors, and container terminal operators which negotiates and administers labour contracts at select ports in the Great Lakes, St. Lawrence River and Maritime Provinces. In the Maritimes the MEA functions at Saint John and Halifax. Some other ports where the MEA functions are Montreal, Three Rivers, Quebec City, Toronto, and Hamilton. The MEA is not involved at ports other than Halifax in Nova Scotia nor is it involved, for example, in British Columbia or Newfoundland ports. The MEA Board of Directors presently has only one member of its fifteen man board domiciled in Nova Scotia and there is no Halifax representation on the MEA Finance Committee. The MEA can have a significant impact on the relative competitive position of the Port of Halifax and for that reason alone it is a subject of interest to the Province of Nova Scotia. The MEA, for instance, collects revenue from its various ports to pay for administrative expenses.

In 1981 this was done on the basis of tonnage resulting in an allocation among St. Lawrence, Maritime and Great Lake ports as follows: 50.0%, 44.6% and 5.4%. It is imperative that these administrative assessments be equitable and based on the lowest possible costs. It is also essential that the MEA Board of Directors and its Committees be equitably constituted to ensure Halifax representation if the association is to function in the interest of the Port of Halifax.

MARITIME EMPLOYERS ASSOCIATION

MONTREAL

DIRECTORS 1982 - 1983

1) W.J. Brown
BROWN & RYAN LIMITED
Montreal

2) V.E. Bayne
GREAT EASTERN SHIPPING LIMITED
Halifax

3) N.G. Beaudoin
LOGISTEC CORPORATION
Montreal

4) I. Campbell
ROBERT REFORD INC.
Montreal

5) M.Gordon
EMPIRE STEVEFORING CO. LTD.
Montreal

6) F.G. Haslam
BRUNTERM LIMITED
Saint John

7) G.E. Hasse
ACL CANADA INC.
Montreal

8) G.D. Kelly
CP SHIPS
Montreal

9) R. Kusel
DART CONTIANERLINE LIMITED
Montreal

10) J.S. Murray (James)
FEDERAL COMMERCE & NAVIGATION LIMITED
Montreal

11) H. Sell
B. & K. SHIPPING AGENCY LTD.
Toronto

12) D.A. Short
MONTREAL SHIPPING CO. LTD.
Montreal

13) G. Smith
F.K. WARREN LTD.
Saint John

14) M.W. Van der Veen
TASK TERMINAL LIMITED
Montreal

15) N. Wolfe
WOLFE STEVEDORES LIMITED
Montreal

APPENDIX F-7

ATLANTIC PROVINCES TRANSPORTATION COMMISSION

OUTLINE OF SERVICES AND FUNCTIONS OF THE ATLANTIC PROVINCES TRANSPORTATION COMMISSION

The Atlantic Provinces Transportation Commission (APTC), with offices in Moncton, N.B., is financially supported by the governments of the four Atlantic Provinces. It is affiliated with the Atlantic Provinces Chamber of Commerce. The objective of APTC is to obtain for persons and industries in the Atlantic Provinces the best transportation services possible at a cost which will permit the Atlantic Provinces to compete in the markets of Canada and throughout the world. The main thrust of the APTC activities is to assist shippers to utilize the most effective means of transportation and distribution management practices.

The overall policy of the APTC is formulated by a Board of Directors numbering twenty-one; of which ten are appointed by the sponsoring governments, ten by the Atlantic Provinces Chamber of Commerce, plus the President of the Atlantic Provinces Chamber of Commerce who, by virtue of his office, also serves as a Director.

APTC Services and Functions

A. Services to Atlantic Provinces' Shippers, Receivers, Carriers and Non-Government Agencies:

1) The maintenance of suitable files of transportation tariffs and other publications to provide shippers, receivers and non-government agencies with data and expertise on rates and charges by all modes of transport.

2) The circulation of information on transportation matters, including rates, service and policy changes.

3) Negotiations with or representations to carriers or their agencies on behalf of transportation users to obtain the best possible rates and services.

4) Assistance to shippers, receivers and non-government agencies or groups with advice on transportation or distribution matters, including the preparation of briefs and submissions.

5) Assistance to carriers where such assistance is consistent with the Commission's overall objective.

B. Technical Advice and Assistance to Provincial Governments

The Commission provides industrial development departments or their agencies information on transportation services and rates, including information on the competitive position of an Atlantic Provinces location in relation to actual or potential locations elsewhere. This service may also include negotiations with the carriers for satisfactory rates and charges.

C. Services to Provincial Governments

1) Provides the departments responsible for transportation in each provincial government with advice and assistance in the formulation of transportation policy.

2) Represents, upon request, the governments or other interests at federal regulatory hearings or inquiries.

3) Upon request, makes submissions on behalf of the provincial governments to regulatory bodies and fact finding commissions.

4) Convenes conferences of interested parties in specific transportation matters.

D. Services to Regional Exporters

1) In addition to the role of keeping regional exporters informed of changes in rates and services affecting their ability to reach export markets, which is done through the Commission's monthly bulletin "Tips & Topics", daily Rate Advices, as well as the "Directory of Ocean Containership Services" publication, the APTC maintains copies of the conference line ocean tariffs covering outward movements from Eastern Canada to various world markets including the United Kingdom, Continental Europe, Mediterranean ports, Australia and New Zealand, Japan and certain other Far East ports. Through these publications the APTC is able to maintain a check on the competitive position of exporters and of commodities which are exported from this region as compared to other areas in the Atlantic Provinces for information as to ocean rates and services, including advice as to the reasonableness of existing rates, as well as assistance in negotiating new or lower rates, where required.

2) The APTC is an active member organization of the Canadian Shippers' Council which is an organization authorized under the Shipping Conferences Exemption Act to represent the interests of shippers throughout Canada in dealing with steamship conferences. The CSC provides a forum to bring together organizations representing the interests of shippers to consider, where appropriate and agreed, joint action on common concerns, which involve general principles and policies, or on such other matters which any shippers' association has been unable to resolve, and are referred to the Council.

POOR

QUALITY

ORIGINAL